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China Report

ECONOMIC AFFAIRS

No. 64

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NATIONAL ECONOMIC POLICY

RESTRUCTURING, REFORMING OF ECONOMIC SYSTEM DISCUSSED

Beijing RENMIN RIBAO in Chinese 4 Apr 80 p 5

[Article by Lin Zili [2651 1311 0500]: "A Beginning for Restructuring China's Economic System--Experiments of Increased Power of Decisionmaking for Enterprises in Sichuan, Anhui and Zhejiang Studied"]

[Text] A successful start has been made in the practice of restructuring China's economic system. It heralds a vigorous advance of the socialist modernization in a suitable economic form.

In the more than 1 year since the formulation of the policy for restructuring the economic system by the Third Plenary Session of the 11th Party Central Committee, the study of economic theories has been more serious than ever in the search for some way of restructuring. Many viewpoints and interpretations have been advanced, and discussions on them are continuing to deepen. Furthermore, a number of practical workers have actively carried out experiments on the increased decisionmaking power by the enterprises, and many provinces and municipalities are following their examples.

From October to December 1979, we visited Sichuan, Anhui and Zhejiang for a preliminary investigation of the experimental enterprises with increased decisionmaking power. In the course of our investigation, we saw that although the scope of the experiment is not broad and the change of the former system is far from thorough, outstanding success has already been achieved. The profits gained by the experimental enterprises in Sichuan in 1979 increased by a wide margin over those of 1978, and were generally more than those gained by the non-experimental enterprises. Through increased decisionmaking power, the enterprises have increased state accumulation and social wealth. But the idea behind the experiment is not limited only to these gains. The smashing of the old economic system, which has for many years hampered the development of productive forces, has begun, and the formerly inert economic life has regained its innate motive force and is beginning to show its vitality. From this, we can learn many useful lessons which help us further emancipate our minds, eliminate our misgivings, and strengthen our confidence and determination in the restructuring. We must particularly note the striking difference between the present experiment and the previous attempts. This time, we have been spared the trouble of considering the problem of centralization and decentralization of the power of management at the higher levels, and have treated the interests of the enterprises, who are the direct producers, as the core so that this experiment will acquire the essence of socialist economic relations which are of even greater significance. Along with the progress of the restructuring, people can more clearly see its significance as a social practice.

A New Change in Economic Relations

Experiments in increased power of decisionmaking for enterprises in Sichuan began in October 1978. After the Third Plenary Session of the 11th Party Central Committee, the number of experimental units increased from 6 to 100, and by 1980, it has further increased to 300. Experiments in Anhui and Zhejiang began in the fourth season of 1979. There are now 80 experimental enterprises in Anhui and 74 in Zhejiang.

Recently, some articles and new reports have introduced the methods of experiment and the achievements as shown by the increase of production and accumulation after the adoption of these methods in the three provinces, particularly in Sichuan. To avoid repetition, we will, instead of dwelling on these aspects, carefully analyze the changes in the social economic relations which have taken place in the course of this experiment and the significance of these changes.

First, let us look at the matter from the process of production. In the past, the enterprises had to follow state plans as to what to produce, how much to produce and how to produce, and the state plan left practically no leeway for the enterprises. Now, the experimental enterprises can plan the production of a portion of their products independently of state plans. When an enterprise produces entirely for the sake of fulfilling the state plan, and the assigned task is below its productive capacity, the remaining productive capacity will be simply left idle and wasted. The enterprise has to continue production in the same way even though the products prescribed by the plan are unwanted in the market and fail to realize their value. After the introduction of the experiment, the situation is changed. The Dujiang [6757 3068] Carpentry Machinery Plant produces various types of sawing machines, shapers and drilling machines. The quality of its products has been quite good, and it enjoys quite a reputation at home and abroad. Last year, the state reduced its assignment to this plant by a fairly wide margin. Since it was not fully occupied, this plant tried many methods to expand its production. It printed attractive pamphlets showing its products, to be mailed to various parts of the country, and organized four small groups, led by responsible persons of the plant, to visit the consumers in various provinces and municipalities. As a result, many consumers came to them to place orders for their products. The majority of its products throughout the year were planned by itself, and full play was given to its productive capacity. Again, in the case of the Sichuan No 1 Cotton Textile Mill, the amount of textile products was entirely determined by state planning. Some of the products were not in demand in the market and

and became overstocked, while other products in great demand were in short supply because of underproduction. After the introduction of the experiment, this mill added several new products based on a survey of market conditions after fulfilling the state production plan. The readjusted composition of products was then more consistent with market demand. According to the past practice, the plant had to first design the products, then produce them, and finally set the prices. Later, after comparing the different prices of different qualities of the dacron sold, it discovered that the type which was sold at 1.5 yuan a foot was most welcomed by the masses. Therefore, the mill decided to produce a type to be sold at 1.45 yuan a foot, and designed the product according to this price. Since this type was easy on the purse of the majority of customers and was based on consumer psychology, the sale was brisk. Thus we can see that the experiment has brought a significant change in the process of production. Although the state still has the main control over what to produce, how much to produce and how to produce, the enterprise has begun to share this control to a certain extent and played some decisive role in the direct production process.

Now let us take a look at the process of circulation. In the past, the required equipment, raw and semi-finished materials, fuel and power were all supplied by the state under a unified plan, while the enterprise's products were all procured and marketed by the state, also under a unified plan. The enterprise could take only whatever the state supplies, in any quantity and at any price. The same compulsory character was also manifested in marketing, and no leeway was left at all. The experimental enterprises, however, are more flexible in either supply or marketing. Last year, the profit gained by the Zhongnan [Central Southern] Rubber Plant of Chongqing was double the planned profit even though it happened to be a rather difficult year. The amount of rubber supplied by the state was reduced, but the experiment enabled it to find other sources of supply. It sent people to Yunnan, Guangxi and some other places, and signed contracts with the departments concerned. Through these contracts, it obtained 30 percent of its total required materials for the whole year. Steel has been for many years controlled by the state, and had to be procured and distributed under a unified plan. After the Chongqing Iron Steel Plant was used as an experimental enterprise, this restriction was lifted. Of the 500,000 tons produced in 1979, nearly 130,000 tons were sold by the plant itself at flexible prices. Since it did not go through the material departments and could avoid the expenses required for the intermediary controlling agencies, the price is generally lower than the state price. It is true that these experimental enterprises still have a long way to go before they can carry out transactions among themselves through economic contracts, but they are now progressing toward this goal.

In distribution, it was formerly the practice for the state to allocate funds for the enterprises after receiving profits turned in. Not only the funds for reproduction, but also the wage and bonus funds, were supplied out of state allocations. Now, the enterprise's revenues, after being used for the workers' personal consumption, are shared between the state and the enterprise at a certain ratio, according to the system of profit sharing.

Normally, profit is a comprehensive expression of economic results. The profit of an enterprise generally reflects the quantity and quality of its products, its consumption and the rate of turnover in the circulation of funds. According to the fixed ratio, greater profits will mean a greater portion to be retained by the enterprise. To gain greater profit, the enterprise must increase the quantity and improve the quality of its products, reduce consumption and speed up the turnover of funds. Thus, the enterprise will have its own motive force in operation, and this type of motive force comes from independent economic benefits. As shown by the experimental enterprises, the protion of profit to be retained by the enterprise is still rather low. However, the enterprises, after all, now have funds at their own disposal and can use them to develop their production, to increase the collective welfare projects for the workers and to raise their bonus funds. In February 1979, the Chongqing No 2 Knitting Mill used the retained funds of 60,000 yuan to buy 20 stocking knitting machines, and after their commissioning, gained a profit of 138,000 yuan in the first half year. Later, the mill bought 60 more stocking knitting machines and made a profit of 630,000 yuan by the year end. The profit for this year is estimated to be about 1.8 million yuan. While expanding its reproduction, this mill also spent 150,000 yuan in building a dormitory of 1,500 square meters. Thus in only 1 year, this mill obtained through its own efforts what it had vainly requisitioned in the previous 5 years. The building of the domitory, for which the workers and staff members had waited more than 10 years, finally materialized.

To obtain maximum benefits, the enterprise will certainly try every way to lower the consumption of individual labor below the average social level. If every enterprise will do the same, it will become a social phenomenon of competition among the enterprises. Although restructuring of the system is only beginning, competition has already begun within a certain scope and to a certain degree among a number of experimental enterprises. The Ningjiang [1337 3068] Machine Tool Plant of Sichuan produced lathes for making instruments and meters, and all of their products are low priced and of fine quality. Last year, the state reduced this plant's production plan and it was seriously short of work. However, the comrades of the plant held that although many lathes had been produced in recent year, the supply of small and medium-sized precision lathes like theirs, with low prices and fine quality, was still inadequate for the general demand, and that the trouble was with the existing system of planned allocations and transfers. To give full play to its productive capacity and to increase profits, they put up an advertisement in RENMIN RIBAO of 25 June 1979 offering to receive direct orders from consumers at home or abroad. Following this advertisement, many orders were received, the avenues for their sales were wide open, and contracts for more than 1,000 sets were signed with domestic and foreign consumers. What is worth mentioning is that four other enterprises producing the same kind of goods felt the need to take some action, in view of Ningjiang Plant's soaring production. The 7 millimeter automatic lathes sold by Ningjiang Plant have a high production rate and high precision, and are steady in processing and easy to operate.

The wholesale price for each set was 9,500 yuan. In an endeavor to get more customers, the other plants of the same trade in Shanghai, Liaoning, Hangzhou and Xian were forced to lower their prices. They even considered suspending their operation, amalgamating or changing over to other products. Competition as a reality in our social economic life can also be clearly seen from the proceedings of the Machinery and Electrical Equipment Ordering Meeting held in Wenjiang Prefecture, Sichuan, in October 1979. This meeting has been described as a miniature "Guangzhou Export Commodity Fair." In this market of the means of production, the products of various enterprises were displayed for people to evaluate and to select, and any interested buyer was free to transact the business on the spot without any other than economic restrictions. If some products were of inferior quality or too highly priced, nobody would buy them. The price then had to be reduced, resulting in a natural price fluctuation which could not be arbitrarily stopped. The glass fiber products displayed at the meeting were produced in Chongqing and sold at only 3,800 yuan. People naturally made a rush for Chongqing's, thus forcing the Luzhou and Zigong enterprises to lower their prices to 3,800 yuan. Though the prices were now the same, the Chongqing goods were of better quality, so still nobody wanted to do business with these two enterprises, which ended up without signing even a single contract. It was reported that the representatives of these two enterprises cried at the meeting. Some enterprises knew that their own products could not compete with others' in both quality and price. They could only quietly leave the meeting and hurry back to their own plants to study ways and means to improve the quality and lower the prices.

We have now analyzed the change of relations among various quarters following the increase of decisionmaking power for the enterprises. All these innovations are quite inspiring, because they indicate the beginning of a new economic form. This is the kind of new commodity economy which cannot come from either capitalism or small commodity production. Commodity economy means socialized production with contractual relationships and economic means as its special features. For example, when the supply, production and marketing are linked together through contracts among different enterprises, lateral relations are formed among different economic units. Their economic activities will be carried out through economic means and without the interference of non-economic forces. However, since this type of commodity economy develops without counting on labor as a commodity, this is a competition between enterprises which stand for the interests of groups of laborers instead of private capitalists, and the purpose of competition is to promote the laborers' collective interests instead of increasing the surplus value of private entrepreneurs. Secondly, because of timely readjustments of the preliminary and sketchy plans, the competition will be gradually weakened in extent and intensity. Therefore, the competition of the new type of commodity economy can only be limited.

People Long for a Change

When we finally begin to march toward the goal of socialist modernization after taking a tortuous road in the past 30 years, the establishment of a new commodity economy, suitable for modernization, is only consistent with the current of events and the people's desire. During the investigation, we were deeply impressed by the people's steadfastness, enthusiasm and spirit in the struggle in defiance of any obstacle. All the people we contacted, either enterprise directors, secretaries, responsible comrades of various economic departments, or leading cadres of the provinces or municipalities, were keen on restructuring, and many of them have worked hard to make the experiment a success. The basic-level cadres were particularly enthusiastic and energetic.

The director of Chengdu Cutting Tool Plant told me at first sight that he had a lot to tell me. "Since half a day would not be enough, can you spare a whole day?" he asked. He then used a parable to show the resistance and the motive force in restructuring: If a stone is buried underground, it can never force its way out of the surface. If it is a seed, however, it will break through the soil to come out. People should regard themselves as "seeds," in his opinion. The party committee secretary of Hefei No 1 Radio Plant was a young man full of energy. In his talk with me, he boldly expressed the hope that his plant could be permitted to become an experimental enterprise "under the control of a director and responsible for its own profit or loss," with the director elected by a representative assembly of the workers and staff members. If he would be elected, he would "form his own cabinet," or the command body. He patted his own chest and said that in this event, he was sure of a good future for the plant. Just in case it fails, he would be willing to take the economic and legal responsibility, or even to go to jail.

While the enterprise cadres all have a strong faith in the experiment, there are also a number of mentally emancipated and far-sighted reformers among the cadres who have worked in the economic departments for a long time. A deputy director of the Anhui Provincial Economic Committee, who is now nearly 70, said that he had been on the industrial-communications front ever since the founding of the People's Republic, with the opportunity to observe things closely during the past 30 years, and that he was now more convinced than ever that if we continued to follow the way copied from the Soviet Union and shut ourselves within the confines of natural economy, there would be no future at all. When we asked whether Anhui's products could compete with those of Shanghai if such a competition is launched, he promptly replied that there was no problem at all because the market was so large. He said: "Take transistor radios, for instance. The so-called high-class products of Shanghai can be sold in the cities, while our Anhui products, with lower prices as their economic advantage, can dominate the rural market. Furthermore, even though we fail in the competition, there is nothing terrible about it. We must have this kind of pressure to push ourselves forward." This is the reason why commodity economy can promote the rapid development of production. There should be no need to worry about the competition because the keener it is, the greater will be the prosperity.

How did the leading cadres at various levels feel about the experiment? Our investigations have given us a clear impression. After his arrival in Sichuan, a principal leading cadre of the Provincial Party Committee went deep among the experimental enterprises and listened to their reports so as to keep himself abreast of the situation. This time, we had an exchange of views on the experiment. He felt that there were many defects in the existing system which must be changed. The present plan in Sichuan is to find a correct way through the experiment. A principal leading comrade of Anhui Province talked about the restructuring with great interest. When we mentioned to him the view of that secretary who boldly asserted himself in "forming his own cabinet," he highly regarded this opinion, and agreed to experiment along this line. Shortly afterward, the Hefei No 1 Radio Plan formally began its experiment.

Economic restructuring is a great practice which will become a stirring scene of the melodrama on the stage of our socialist reconstruction, and the stage curtain has already been raised. We will soon see some people, after casting away the shackles which have been imposed on them for a long time, demonstrating their skills in creating a new world according to their aspirations. The experiment has enabled them to divert their minds and activities from the old beaten path and impelled them to think of new problems and to march toward the historic goal with gigantic strides. Yet during the readjustment, which involved many [illegible], people have in different ways and in varying degrees welcomed these new economic relations. This welcome is a convincing proof of the new economic relations' great power. It also shows how economic restructuring is inevitably identified with our historic progress, and how harmonious it is with the people's will and aspiration

"The people long for a change." This was what the party committee secretary of Dujiang Carpentry Machinery Plant of Sichuan said. During our 1 and 1/2 month's investigations, we have gained a wealth of perceptual data on the meaning of this sentence. A map of the world was hung at its front gate showing the countries to which its products had been sold, and serving as a constant reminder to its workers and staff members of the need to preserve its brand-name and its reputation as their goal in the struggle for the world market. We firmly believe that, along with the progress of the socialist modernization, Chinese products will continue to enhance their reputation in the world. Yet what has attracted even greater attention is the fact that China's determination for restructuring by mobilizing the masses under party leadership is irresistible.

Continued Exploration

The new economic relations now taking shape can have such vigor and vitality, as mentioned above, only because they are commensurate with the requirements of the development of our productive forces at the present state, and are the only suitable economic form for accomplishing the modernization. Of course, they are only beginning to take shape, and have not yet become universal and mature economic relations. On the other hand, the old relations, or the economic system of administrative control characterized by the centralization of power in the central government, have played a positive role at the very beginning, despite their many defects now exposed. Therefore, they will continue to remain firm for a certain time, and cannot be easily and entirely changed all of a sudden. In the process of their materialization and development, the new economic relations will certainly clash with the old system, and this clash is, in the final analysis, a reflection of the contradiction between the productive forces and the relations of production.

The new relations of commodity economy, which are now taking shape in the experiment, take the form of state ownership. In such an economy, the state will supply the enterprises with the material means of production, to be owned and used by the enterprises. Since the enterprises are the owners, they are relatively independent economic entities as well as the producers of commodities. They should be able to compensate for their outlay with their income, and to organize expanded reproduction instead of simple reproduction with their own accumulation. Therefore, the enterprises should control the funds to be used for this purpose instead of relying on state allocations. According to the present experiment, the enterprises can only retain a small portion of the profits, while an appreciable portion still has to come from state allocations. Before the system is completely restructured, the enterprises should endeavor to make the best use of the funds at their disposal instead of relying on the state. Anyway, contradictions will remain until the restructuring has been completed.

Although the portion of profit retained by the enterprise is limited, the enterprise finally has the control of some funds. Generally, the major portion of the retained funds will be used as a supplement for the next productive process. If we will start our observation of the use of the expanded fund from this point, it will not be difficult to detect certain obstacles or restrictions from the old system at various phases of the turnover. For example, in the supply and marketing of the means of production, the material and the commercial departments still have very strong control; in production, only a minor portion can be organized independently of the state plan; in recruiting, using and dismissing labor power, the former labor system is still a handicap. Furthermore, there are even more serious problems of a comprehensive nature. In the former economic relations, the prices were quite inconsistent with the value, and no change has been made, particularly in the industrial departments. This is also a big handicap to the experiment. For a long time, there has been only a vertical chain of command in economic management, and different systems or trades were so strictly separated that any contract among them had to involve a lot of red tape. Moreover, the surplus labor power from the enterprises which have been closed, suspended, amalgamated or reorganized for other lines of products cannot be taken care of by the society in the absence of a sound social security system. Therefore, the enterprises are forced to employ them.

As mentioned above, the clash brought about by the experiment only reflects the contradiction between the old system and the development of productive forces, but the experiment has brought this contradiction to the forefront. If the experiment is to remain at its present stage, or if the situation will return to the same state as existed before the experimentation, this contradiction may be concealed for some time. Anyway, unless the problem is solved, a sharp contradiction will occur sooner or later. Nevertheless, the new economic form now taking shape is not only a concept in people's minds, but a vivid reality before us. People can see its real features, feel its power, and believe in its great future. Under such conditions, it is virtually impossible to eliminate it. In the face of this contradiction, we must continue our advance actively and unswervingly along the road of restructuring, and continue to resolve the contradiction along with the progress of the experiment. Then the whole series of contradictions will be resolved as the experiment develops in depth and breadth. For example, when an experimental enterprise decides on its own items of production, or uses its own accumulated funds for expanded reproduction, it usually encounters problems with the supply of equipment and raw and semi-finished materials. If the means of production become commodities in the market, then the enterprises will be able to buy whatever they need with their money. Does this mean the abolition of the material controlling departments? The solution of this problem is quite simple, because as long as the material departments are converted into material companies and the administrative bodies are converted into enterprises with no monopoly and free to compete among themselves, they are still indispensable in the process of social reproduction. Again, the indiscriminate payment of bonuses does not necessarily mean that the bonus system is wrong. In fact, if the enterprises will be responsible for their own profits or losses, the indiscriminate payment of bonuses and other measures which are detrimental to the enterprises' interests will not happen. After all, since the great practice of economic restructuring has already begun, we should unswervingly carry on and further intensify the experiment. This is only consistent with the objective trend of historical development and with the great current of socialist modernization.

To solve problems and to overcome obstacles, we will have to deepen our study and continue our exploration of many problems of restructuring.

Take the question of the relationship between readjustment and restructuring, for example. The imbalance of the national economy is a rather serious obstacle to the present economic development. Unless this imbalance is proportionately readjusted, the restructuring of the economic system will be difficult. On the other hand, we must also note that there are many causes for the imbalance of the national economy. Basically, however, it is caused by the economic system. The problem of an unbalanced national economy has to be solved by a complete restructuring of the economic system. Since the imbalance is already deeply rooted, a drastic restructuring may cause undue strain. Yet, if we only devote our efforts to readjustment without touching the old system, this readjustment cannot be really fruitful. Therefore, we must firmly proceed with the restructuring wherever it is necessary or possible, or wherever it may affect the smooth progress of the readjustment. Thus readjustment and restructuring will go hand in hand.

Again, let us consider the relationship between economic restructuring and political stability and unity. It is beyond doubt that the preservation of stability and unity is an important condition for the four modernizations. There is no conflict between economic structuring and political stability and unity, because, basically, political stability and unity must have an ever-progressing economic foundation, while the purpose of structuring is to change the economic relations to suit the needs of the modernization of production. Instead of being harmful, restructuring is necessary for prolonged stability and unity. Of course, in the process of structuring, we must be resolute and courageous, and at the same time careful and steady, in order to complete this great undertaking with minimum inconvenience to the society. Therefore, while considering certain problems, we must also take various possibilities into account. For example, there are quite a number of people in society awaiting employment; if further labor power has to become surplus through the restructuring, will it futher aggravate the contradiction? We have made great efforts in implementing the policy on cadres, and have made some arrangements for veteran cadres. However, the new economic relations demand a suitable composition of cadres, and, as a result, a number of senile cadres who do not know about vocational or management work will have to leave their leading posts. What shall we do with them? Readjustment of the system of pricing is also an important aspect of the restructuring of the economic system. The readjustment of the pricing system will affect the price parity among various means of production, and any change in the prices of the means of production will affect the prices of the consumer goods as well as the livelihood of the broad masses. Since this is a very delicate issue with a close bearing on the people's livelihood, what form of action and what steps should be taken in restructuring? There are also many other problems which are generally rather complicated. However, as long as we investigate the situation from various angles and study and discuss matters repeatedly and conscientiously, we can certainly find a suitable solution.

The restructuring of China's economic system has begun. This also marks the beginning of an arduous and glorious task for us in the future modernization, and many things, both theoretical and practical, have to be done. We should continue our explorations with resolute and unwearied efforts, and encourage the discussion of different opinions.

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NATIONAL ECONOMIC POLICY

RELATIONS BETWEEN READJUSTING, RESTRUCTURING DISCUSSED

HK281000 Beijing JINGJI YANJIU [ECONOMIC RESEARCH] in Chinese No 4, 20 Apr 80 pp 53-56

[Article by Liang Wensen [2733 2429 2773] and Tien Jianghai [2944 3068 3189] of the Economic Research Institute of the Chinese Academy of Social Sciences: "Which Is the Nucleus, Readjusting or Restructuring?"]

[Text] At a time when the principle of "readjusting, restructuring, consolidating and improving" is being implemented, we found that while some people have agreed to restructuring, others have opposed it. Those agreed to it are right and those opposed are wrong. There are many aspects of opposing readjusting. For example, those overextended capital construction fronts, which should be shortened through readjusting, have not been readjusted due to ideological obstacles. On the contrary, people hesitated to take readjustment measures. Some departments have cut down their investments but maintained their projects, while others still privately maintain their projects although they have publicly cut them down. Some units have continued blindly with their production of goods that have exceeded demand although the varieties, specifications and quality of these products are not in line with demands. Furthermore, such units have refused to close down, suspend their production, merge or produce other products. They do not care that their products have been overstocked. Other units, whose products are in short supply and are needed for developing the economy and meeting the people's daily needs, are not guaranteed a supply of raw material, fuel and power even though such products create more foreign exchange. As a result, those which should be readjusted down refuse to give in and those which should be readjusted up cannot be readjusted because they are contending for readjustment. If these problems cannot be solved now, it will be impossible to win the first battle in the economic front following the shift in the work throughout the country to socialist modernization. In addition, we will be unable to develop production rapidly and raise the people's living standards.

Why have some people agreed to restructuring while others have opposed it? One of the many reasons is that people do not understand the importance of readjusting, nor do they correctly realize the relation between readjusting and restructuring. They have felt that the key point is restructuring, not readjusting. They think that the national economy is out of proportion and that the existence of an irrational economic structure is the result of the present economic management system. They think that it is impossible to readjust the economic proportions without restructuring the system. Hence, restructuring is the nucleus and must be carried out first. Which is the nucleus that will affect the whole situation--readjusting or restructuring? What are the relations between the two? Which should be carried out first? Such questions must be clarified.

Readjusting and restructuring are part of the principle of "readjusting, restructuring, consolidating and developing." They both have the same goal and complement and promote each other. We must not regard them contradictorily. But they have different features. Each has its own contradictions that should be solved through different methods. Therefore, we cannot treat them in the same way, nor can we mix them up.

The main task of readjusting is to put an end to the disproportionate national economy that was caused by Lin Biao and the "gang of four." But in carrying out readjustment, efforts should be made to solve the problems in the present economic structure and in the lopsided economic development. That is to say, to meet the needs of the basic socialist economic law and the law of systematic and proportionate development, we must turn the national economy that is without complete planning and under semianarchical situation onto the road of lasting, proportionate and high development in a planned way. To do this, it is imperative, on the basis of broad democracy, to readjust the economy in such a way that it will develop comprehensively and proportionately with high centralism.

The task of restructuring is to reform part of the present economic management system and the enterprises' management system that runs counter to the objective economic law and hinders the development of production. To do this well, it is imperative to solve the relations of autonomy between the party Central Committee and localities, between the state and the enterprises and among the departments within the enterprises themselves. In fact, this means readjusting the production relations to make them accord with productive forces and to readjust the superstructure to bring it in line with the economic base. To carry out a complete economic method, it is imperative, under the unified and centralized leadership of the party Central Committee, to extend the autonomy of the localities, particularly the autonomy of the enterprises.

On a basis of our present situation, it is important to complete both the tasks of readjusting and restructuring. Both must be combined and must complement each other. But readjusting is the leading factor while restructuring is subordinate. The latter must be carried out to benefit the former. This assertion can be explained in the following points.

First, readjusting will result in a basic foundation for smoothly carrying out the four modernizations.

Comrade Hua Guofeng pointed out in his "Report on the Work of the Government" to the second session of the Fifth NPC: "To realize the four modernizations in such a big country as ours with over 900 million people is a highly complex and difficult task. Further strengthening of the groundwork is an important precondition for smooth development later." Our foundation will decide the development of our economy. It is impossible to build on uneven ground without first leveling it. Similarly, the national economy cannot develop rapidly and proportionately for a long period, the people's material and cultural life cannot be improved and the four modernizations cannot be realized with an extremely irrational economic structure.

If we do not first readjust the national economy according to objective proportions, do not cut down investment in heavy industry and do not increase investment in agriculture and light industry while continuing to follow the principle of giving priority to heavy industry and neglecting light industry and agriculture, the present situation of excessive heavy industrial construction and the too short light industrial construction and agricultural front will continue to develop, with the national economy developing even more lopsidedly.

Another main task of readjusting is to readjust the proportion of production. If we do not readjust down the production of goods that have exceeded demand (mainly some heavy industrial products) more and more such products will be overstocked. Such products possess more floating funds and bank credits and bring more losses to enterprises. As a result, the state's financial income will not be guaranteed and its income and expenditures may even be thrown out of balance, because many such products are not needed by society, not useful at present or are high priced and of poor quality.

On the contrary, if we do not readjust up the production of the goods that are in short supply (mainly fuel, power, building material, light industrial products and textiles), we will not have enough such products that are needed for developing the economy and meeting the demands of the people's life. As a result, the growth of production itself, the supply of consumer goods and people's life will be directly affected and the gap between purchasing power and the supply of consumer goods will widen.

The most important reason that has hindered the readjustment down of the production of goods that exceed demand and the readjustment up of the production of the goods that are in short supply is that the capital construction front is over extended and the departments concerned are not resolute in cutting it down. Since the capital construction projects that should be unhorsed are still continuing, an enormous means of production is being used on the capital construction front to affect production. On the other hand, a number of urgent capital construction projects cannot be started to begin production in due time. Some of these projects that have been started have been suspended because the production of the necessary equipment has been stopped. The purpose of capital construction is to change the structure of production and improve production capacity. But according to the abovementioned situation, capital construction has become a factor that spoils the proportionate development of social production. Therefore, failing to cut short the overly extended capital construction front means that the proportion of accumulation funds for national income does not drop, the disproportion between accumulation and consuming will continue to worsen and the living standard of the people cannot be improved.

All the situations mentioned above show that if we do not consider and handle problems from the point of this nucleus, we will suffer untold losses. Those who considered restructuring to be more beneficial to their own regions and enterprises and therefore agreed to it while opposing readjusting, those who paid attention to restructuring but neglected readjusting and those who considered restructuring as the nucleus are all wrong. Such assertions are dangerous.

Second, readjusting is the premise of restructuring.

We can hardly restructure the economic system smoothly when our national economy is seriously out of proportion and when we are not unanimous with regard to readjusting and restructuring. The main goal of restructuring systems is to expand the autonomy of enterprises. Because of an irrational economic structure, short supply of fuel, power and raw material and a shortage of transportation facilities, the enterprises cannot carry out their production normally or may even suspend their production. Under such a situation, it is difficult to clarify economic responsibility, with the enterprises themselves not being able to exercise autonomy. In addition, it is difficult to realize and implement economic contracts among enterprises and the state's assessing system for them. The principle of material interest, the system for awards and punishment and economic laws and regulations also can hardly be implemented. Such a situation may lead one to think that it seems to be improper to trial-implement this new economic system. In fact, such a situation is caused by the fact that the external and internal conditions for implementing the system are [not] yet ready. One of the most important conditions is that the national economy must develop proportionately and stably. Such an economic situation can be realized through planned readjustment.

Of course, to do a good readjustment job, we must also do well in the necessary restructuring because it is difficult to work according to objective economic laws under the present economic management system. In addition, too great of centralism and too strict of state monopoly have made it difficult to organize production according to social demand. As a result, production, supplies and sales are out of balance. From a long point of view, the restructuring of the economic management system will help the national economy develop rapidly, proportionately and in a planned way as well as help production achieve the highest output with the lowest labor consumption. From a short point of view, the restructuring will help promote the readjustment of the national economy. For example, under the unified and planned leadership of the state, light industry, textile industry and handicraft industry will be put under the management of localities. The localities and enterprises will be granted more autonomy with regard to their workers, finance, material, production, supplies and sales. Such measures will enable localities and enterprises to arrange and manage production flexibly and with initiative according to social demands and their own situations. As a result, they will be able to display their economic advantages and combine their product regulation planning with market regulating. Such a situation is beneficial to balancing the national economy comprehensively and to combining production with supplies and sales. The income of enterprises and worker wages will be directly related with the achievements of their businesses. Consequently, the enterprises and their workers will work hard to tap their potentials to increase production and practice economy and stop the wasting of manpower. Enterprises and regions may form specialized and joint companies according to coordination in specialized production so as to change the situation of "big and versatile" and "small and versatile" enterprises and low labor productivity. All this is the positive role the restructuring plays in readjusting. It also shows that restructuring can be carried out before readjusting is completely carried out. They can be carried out simultaneously to complement each other.

It will not be possible to carry out restructuring in a big way without doing a good job in readjusting. Through restructuring, enterprises will carry out independent, all-round and strict economic accounting, exercise a compensation system for the use of fixed assets and floating funds and assess economic achievement according to the funds' profit rate. But as supplies, production and sales are out of balance and coal, electric power and raw material are in short supply, a number of equipment has remained idle. Because the national economy is out of proportion, the floating funds cannot be smoothly transformed into reserve, production and product funds. As a result, the turnover of the floating funds will slow down which will mean a serious waste. It will then be difficult to assess the economy. But we cannot put the blame on the bad business of the enterprises. Restructuring will also aim at granting enterprises more economic rights and interests and responsibility; however, as the national economy is yet to be comprehensively balanced, it is difficult to meet the state's production plan and carry out economic contracts. It is also difficult to clarify responsibility, awards and punishment, do well in implementing the principle of material interests and closely combine the economic interests of enterprises and workers with their production and management activities.

Readjusting is the premise of restructuring. As we have begun to concentrate our efforts to complete the readjusting work in 3 years, the first problem we have met is how to arrange the economic and annual planning during this period. That is to say, in working out the national economic readjustment planning, what proportion should be taken when distributing the means of production and laborers to various departments? The national economic readjustment planning should be in line with objective laws and become a guide for hundreds of millions of workers in production. It must include scientific predictions and the continuous development of social reproduction.

Therefore, the readjustment of planning must be carried out before the economic system is completely restructured. The restructuring of the economic system must be carried out on a trial basis to sum up experiences before it is popularized. That is to say, a long period is needed to proceed from minor restructuring to major restructuring. This may take several or even a dozen years. Such a long period is needed so that when the relations of production and the superstructure are being restructured they will not damage the productive forces. The present restructuring of the system has surpassed the previous restructuring in depth and width. It demands us to prepare in both ideology and material. In carrying out restructuring work, the so-called ideological preparation requires us to sum up historical experiences with practice as the sole criterion for testing truth to guide our economic activities. The material preparation refers to the stable and proportionate development of the economy as the base for restructuring; such development can only follow economic readjustment.

In short, restructuring depends on readjusting. The ideas of those who regard the readjustment of economic proportion through restructuring the economic system as impossible and who have, therefore, suggested restructuring first and readjusting second are groundless and not correct.

Third, the present restructuring must follow the goal of readjusting.

We are not carrying out restructuring for its own sake. The main goal of restructuring is to correctly handle the relations among economic management departments at various levels from the point of clarifying autonomy and responsibility and of material interests so as to fully display the initiatives of the party Central Committee, localities, enterprises and workers and rapidly develop productive forces. The development of productive forces is mainly manifested in the increase of material products. But there must be a concrete orientation and goal with regard to the output of the products that should be increased rapidly and the varieties, specification and quality of the products that should be readjusted and improved. But such are the contents of readjusting rather than restructuring. Readjusting means developing production proportionately and in a planned way according to the socialist basic economic law. Its economic goal is to increase finished products as much as possible to meet the increasing material and cultural life of society and people. The present restructuring work must be subordinate to this goal.

We must also understand that the main point of restructuring the economic management system is to expand the autonomy of localities, particularly that of enterprises. The main point of readjusting is to readjust the proportionate relations of the national economy as a whole. Restructuring and readjusting may sometimes be contradictory to each other. Therefore, when a region or an enterprise is solving an economic problem, it may be beneficial and feasible to itself; but it may not be necessarily beneficial and feasible to the whole national economy. Under such conditions, restructuring must be subordinate to readjusting. A region or an enterprise must not refuse to consider the whole interest of readjustment just because it will have its autonomy expanded through restructuring. For example, it is no doubt generally considered a good thing to expand the autonomy of enterprises because they will be able to drastically increase their production with expanded autonomy. But at present, the whole national economy has been developing in an unbalanced way. While some products are in short supply, others have been overstocked. Therefore, if the production of certain goods is considered beneficial to an enterprise, it may not be in line with demand if it is considered from the point of the whole national economy. Those enterprises which have to be closed down, suspended, merged or shifted to producing other goods must not refuse readjustment on the pretext of their autonomy.

For another example, since the capital construction front is too long, quite a few projects have to be readjusted down for the interest of the whole national economy. But if considered from the point of a region or an enterprise, the projects must be continued. Some regions have even demanded that none of their projects be cut down or that their projects be "sliced down" according to percentage. Such ideas in fact deny the necessity of readjusting. What is to be done under such a situation? Must readjustment be carried out or yield to the demand of localities and the cancellation of readjustment? No doubt, the demands of readjustment must be obeyed.

The present material supply system system, under which all material is transferred and supplied according to unified planning, must also be restructured. But at present it is not only impossible to commercialize the supply of all material but such moves will also conflict with the readjustment work of the whole national economy. Under this situation, restructuring must give way to readjusting.

In short, to solve the long accumulated serious disproportion of the national economy, we can only resort to centralized measures to create conditions for more decentralization in the future. But if we proceed from self-departmentalism, regard the restructuring of the economic system as delegating power to the lower levels and consider that there are "crumbs to be picked up and therefore suggest the more decentralization the better, such ideas will not only be one-sided but also harmful to the interest of the whole country.

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GOAL OF SOCIALIST PRODUCTION IS TO SATISFY WORKERS' NEEDS

Wuhan WUHAN DAXUE XUEBAO--ZHEXUE SHEHUI KEZUE BAN [WUHAN UNIVERSITY JOURNAL--PHILOSOPHY AND SOCIAL SCIENCES EDITION] in Chinese No 1, Jan 80 pp 51-54

[Article by Xong Yiqiu [3574 2034 3061]: "A Talk on the Goals of Socialist Production"]

[Text] The goal of socialist production is to satisfy to the maximum extent possible the laborers' increasing material and cultural needs. The laborers' needs in this regard consist of three aspects, namely, the need to maintain their existence, the need to develop their physical and intellectual potential in an all-round manner, and the need to enjoy all the fruits of science and the arts. Along with the development of our social productive forces, the laborers' material and cultural needs have continued to increase and have become greater and greater, especially in regard to those material and cultural resources which are of high quality and great utility, which are more beneficial to their physical and mental health and to the all-round development of their physical and intellectual potential, and which would therefore make the laborers' life richer and more colorful. Socialist production must "not only satisfy the needs of members of society but also fully guarantee the welfare of all members of society and their free, all-round development"[1] and "enable all laborers to lead the finest and happiest life possible."[2]

The goal of socialist production, like the goal of any other social production, is not determined by people's subjective desires or man's subjective will; it belongs to the objective realm of economics, and it is determined by the form of the ownership of the means of production and the nature of the whole productive system based on such ownership. Under capitalism, it is the capitalists who possess the means of production, and the laborers are forced to sell their labor power. In the production process, the capitalists occupy positions of management and supervision while labor power and the means of production are united as elements of capital to play the relevant role. Hence, the products of this process are the products of capital and they serve the interest of the capitalists; the goal of production, under such circumstances, is bound to be to gain profits. Because public ownership of the means of production is established in a socialist society, laborers possess the means of production together, and they also manage the process of production in common. The laborers use their personal labor power as social labor power and it is directly united with the publicly owned means of production. Hence, the goal of social production undergoes a fundamental change. Laborers not only demand, but also are capable of establishing, a planned relationship between social production and social needs in order to subject social production entirely to their own control and hence to serve their own interests and needs. Socialist laborers are different from private laborers or any private owners; they need, on the basis of maintaining their existence, to develop their physical and intellectual potential in an all-round way and to enjoy all the fruits of science and the arts.

Concerning the goals of socialist production as a whole, the "gang of four" did their best to distort them. If anybody should say that the goal of socialist production is to satisfy to the maximum extent possible the laborers' material and cultural needs, they would attack him as a follower of modern revisionism and bourgeois welfare thinking. That volume on "Political Economy of Socialism" fabricated by the "gang of four" in Shanghai puts forward the nonsense that "The reason modern revisionism tries so diligently to substitute bourgeois welfare thinking for the goal of socialist production is because its exponents intend to hoodwink the masses with clever talk about eating well, having good clothes to wear, and having good houses to live in so that they would forget about class struggle, forget about the revolution, forget about eliminating the classes and the fundamental goal of realizing communism." Zhang Chunqiao publicly propagated that "It matters very little if our 800 million people suffer some hardship in their life." For long periods of time, many confusing and erroneous views have existed in our ranks. As reflected in our theoretical propaganda, we often take the consolidation and perfection of the socialist system, the strengthening of national defense, and the expansion of reproduction as the goals, or the principal goals, of socialist production and place the satisfaction of the laborers' needs in their material and cultural life as secondary. As reflected in our practical work, we blindly pursue lofty targets, high speeds, the taking of steel production as the keystone, the formulating of plans in our national economy according to the order of heavy industry, light industry, and then agriculture; we emphasize capital cumulation while taking consumption lightly; we emphasize production while taking our livelihood lightly. But we must criticize the preposterous allegations made by the "gang of four"; we must also clarify the erroneous beliefs in our own thinking.

Very clearly, the Communist Party's pursuit of class struggle, revolution, socialism and communism is not itself the goal; such pursuit is intended to liberate laborers from the oppression and exploitation of the landlord and bourgeois classes so that they can, on the basis of a vigorous development of their productive forces, lead the finest and happiest life possible. Stalin profoundly pointed out: When the capitalist elements have already collapsed under attack, and the paupers have already gotten rid of exploitation, the tasks of the Leninists would no longer be to consolidate or preserve the phenomenon of poverty, whose premise already disappeared, or the paupers themselves; instead, the tasks would be to eliminate the phenomenon of poverty and to uplift the paupers to a life of abundance. If socialism were not intended to uplift the paupers to a life of abundance, then why should efforts have been made at all to stage the October Revolution, to overthrow capitalism, and to build socialism over the years? Who would need such socialism? This would not be any socialism but a satire to socialism. Socialism intends precisely, on the basis of a vigorous development of social productive forces, to satisfy all the needs of the laboring people comprehensively and fully with a high degree of culture; it does not intend to restrict or refuse to satisfy such needs.[3] Would the improvement and elevation of the level of people's material and cultural life make them forget the revolution? Precisely to the contrary, it is exactly because socialism has not only brought political liberation but also a continued elevation of the standards of living to the laborers that the laborers learned through their own experience to love socialism and thereby to exert their own revolutionary zeal even more fully. If, after several decades of work on socialism, there is still very little improvement in the laborers' life, then even while the rate of growth in production seems high, some people's faith in socialism is bound to become shaken, and doubt toward the socialist system is bound to result. The view that only when people are poor would they resort to revolution, and if they get rich they would become revisionists, is absolutely mistaken.

Can we say that in order to quicken our pace in building socialism, especially when the economic foundation of our country remains weak, we need further to emphasize capital cumulation while taking consumption lightly, and to emphasize production while taking our livelihood lightly? No doubt, production is the foundation; we can only improve the laborers' material and cultural life on the basis of the development of production. Nor is there any doubt that we should quicken our pace in building socialism, and, therefore, we should also emphasize capital cumulation and production. But we must absolutely not take consumption lightly or ignore consumption. First of all, because "in a communist society, labor already cumulated is merely a means to extend, enrich and elevate the workers' livelihood."[4] When production and cumulation deviate from the satisfaction of the laborers' needs in their material and cultural life and deviate from consumption, then this would be equivalent to means deviating from the goal, which makes them meaningless. Anybody knows very clearly that if the products produced are all useless or cannot be sold but must be piled in the warehouse, then that kind of production would be devoid of any meaning except a waste of resources; it produces no real useful value. But we should also see that if certain production and cumulation not only squeeze off the laborers' present consumption but the products they produce and the productive capability they yield also remain cyclical from beginning to end within the first category and prove to be of no help to the development of the second category of production or to the improvement of people's livelihood, then such production and cumulation are likewise meaningless. Laborers do not need such production for production's sake. In the second place, because production and consumption are opposites in unity, if the level of consumption is not elevated (let alone if it is impaired), there would be no cause for production to develop in any down-to-earth way. Without labor power, production cannot proceed. In the face of reproduction apart from labor power, social reproduction also cannot continue. The laborers' consumption "is itself an internal factor of productive activity."[5] In order to maintain society's simple reproduction, it is necessary to guarantee the simple reproduction of labor power through consumption; in order to enlarge social reproduction, it is necessary to elevate the level of the laborers' material and cultural consumption and to develop the laborers' physical and intellectual potential. At the same time, only when the products produced are consumed is production ultimately complete, and only then can a new process of production begin again. If the products produced cannot find a market and are not consumed, then whether it is an enterprise or a society, its reproductive process is bound to become interrupted. Consumption creates the need for new production. The elevation of the level of consumption, the expansion of the market, and the formation of new needs are necessary conditions for enlarged reproduction as well as important promotive forces for enlarged reproduction. Therefore, we absolutely cannot put production and consumption in opposition to each other and look at consumption as something negative; we should see consumption as the goal of production, and see the positive effect of consumption on production.

Indeed, the economic foundation of our country is very weak; but this can hardly become an excuse for taking consumption lightly or ignoring it altogether. We should say that, because of such weak foundation, the level of the laborers' livelihood is also low and hence even simple reproduction of labor power sometimes encounters difficulty; for this reason, there is even a greater necessity to emphasize consumption and a greater need to make production serve consumption, as well as a greater need to elevate, on the basis of the development of production, as much as possible the level of the laborers' material and cultural consumption. During the period of the second revolutionary civil war, the economic foundation of the area of our Central Soviets was, of course, far weaker than that of today, and we were also fighting a war; yet, Comrade Mao Zedong chose to emphasize repeatedly how we should genuinely work for the interests of the masses and look after their needs and improve their livelihood. This should be very instructive to us.

Can we say that, because present interest should be subordinate to long-range interest, therefore consumption should be subordinate to cumulation and livelihood should be subordinate to production, so that it is natural for us to emphasize cumulation and production and take consumption and livelihood lightly? We cannot say so. First of all, the long-range interest and present interest are not like a means and a goal to each other. The way production serves the laborers' needs in material and cultural consumption includes not only how it serves their present needs in such consumption but also how it serves their future increasing needs in such consumption. Therefore, the relationship between long-range interest and present interest is not the same as the relationship between production and consumption. In the second place, insofar as the relationship between cumulation, enlarged reproduction and the satisfaction of the laborers' present needs in consumption is concerned, there is indeed a comparable relationship between long-range interest and present interest involved. In this relationship between the two, the latter should, of course, not be allowed to harm the former. That is to say, we should not, for the sake of enabling laborers to have enough to eat and good things to wear at the present, divide up and use up everything; we must build the elevation of the laborers' level of consumption on the basis of the development of production, we must make the development of production sufficient to satisfy the laborers' increasing needs in their material and cultural life. But we must also try to satisfy the laborers' present needs as much as possible so as to assure gradual improvement of the laborers' level of consumption, and not make the subordination of their present interest to their long-range interest absolute or one-sided, or make long-range interest swallow up present interest altogether. What should be made especially clear is that only that which genuinely serves the elevation of the laborers' future level of consumption, only that cumulation and enlarged reproduction which is beneficial to the satisfaction of the laborers' increasing needs in material and cultural life, represents the laborers' long-range interest. The kind of cumulation and enlarged reproduction which produces for production's sake is not at all concerned with the laborers' long-range interest. If such cumulation and enlarged reproduction which violates the goal of socialist production is mistaken as the laborers' long-range interest, then, under the appearance of long-range interest, the laborers' real interest is liable to be impaired.

Stalin pointed out: The main characteristic and requirement of the fundamental economic law of socialism is to "guarantee the satisfaction to the maximum extent possible of the entire society's constantly increasing material and cultural needs with methods which enable socialist production to continue to expand and to become more perfect on a highly technical basis."[6] The way the goals of socialist production reflect the substance of socialist economy is the most important content of the fundamental economic law of socialism. The way the fundamental economic law of socialism determines all principal aspects and all principal processes of the development of socialist production is actually the decisive functioning of the goals of socialist production. Clear understanding of the goals of socialist production is of fundamental significance to our correct organization of the national economy.

At present we are in the process of carrying out the policy of readjusting, restructuring, rectifying and improving our national economy; this is the first battle for the realization of the four modernizations. In order to readjust the national economy well, we should have a correct understanding of the present situation of the national economy, and we should make sure what is meant by the national economy developing forward proportionately and what is planned economy. In all this, we need to understand the goals of socialist production. After all, what is planned economy? It is not just that the state would formulate an economic plan and the various departments and various enterprises would then organize production and circulation according to that plan, and this would be called a planned economy. The essence and goal of planned economy is to install a planned relationship between socialist production and social needs and to have socialist production serve to satisfy to the maximum extent possible the laborers' increasing material and cultural needs. If deviating from the goal of socialist production, then the so-called planned management, planned economy, would actually become blind and turn into "planned" blind production, blind development. What is meant by long line, and what is meant by short line? What is the criterion for appraising whether relations between different proportions of the national economy are well adjusted or not? All this must also be based on the requirements of the goals of socialist production. We say that at present the relations between different proportions of our national economy are seriously ill-adjusted; this is mainly because it violates the requirement of the goals of socialist production, as for long periods of time heavy industry squeezes agriculture and light industry, cumulation squeezes consumption, and production squeezes livelihood, and the economy as a whole therefore seriously affects the improvement of people's living conditions. Starting from this, we also clearly see that in our national economy, heavy industry is long line and agriculture and light industry are short line [production]. Of course, a long line also harbors a short line, and vice versa; when we speak of the production of a certain concrete department or concrete product, we need to make a further analysis. The reason we seek to readjust the national economy is precisely to change the present situation of a serious maladjustment in relations between different proportions and to turn our economy into a real planned economy, to establish a planned relationship between socialist production and social needs, and thereby redirect production, distribution and circulation in the whole society onto a course which follows the goals of socialist production.

We need to reform our economic management system. Why do we need to reform it? There are just two reasons: First, because it does not facilitate the development of social production; second, because it has caused dislocation between social production and social needs. Under our current economic management system, various tendencies of producing for production's sake have inevitably appeared. It is imperative to reform this economic management system in order to solve thoroughly the problems of producing for production's sake and of dislocation between social production and social needs; and, in order to reform this economic management system well, it is imperative that the goals of socialist production be clarified. Only by clarifying the goals of production would it be possible to appraise the soundness and the advantages of an economic management system. For example, should we really make the enterprises responsible for their own gains and losses and handle their own independent accounting? Should we unite plan adjustment with market adjustment? In order to answer such questions, we must start from the nature and conditions of our productive forces at present and study how to handle socialist relations correctly based on material interests, how to accord with the law of movement and the material and technical relationships of productive forces in the process of social reproduction, and thereby enable social production to serve even better the laborers' needs in their material and cultural life.

Making sure of the goals of socialist production is also very important to our insistence on the socialist direction for the development of our national economy and to the accelerated realization of the four modernizations for building our country into a socialist power. Since the goals of socialist production are determined by socialist public ownership and by the nature of the entirety of socialist relations of production based on such ownership, and they also reflect the essence of the socialist economy, therefore, clarifying the goals of socialist production and doing things according to the requirement of the goals of socialist production also have to do with insistence on such socialist public ownership and insistence on the socialist direction of the national economy. In order to accelerate the realization of the four modernizations, we must avoid the practice of causing great ebbs and flows in the development of our national economy as in the past. Why did such practices occur? One of the important reasons was our violation of the fundamental economic law of socialism: We forgot the goals of socialist production and hence caused a maladjustment in the proportionate development of our national economy. Today, we can no longer permit the repetition of such a history. We must clarify the goals of socialist production, reform the management system of our national economy, fundamentally eliminate the conditions that cause serious maladjustments in the proportionate development of our national economy, and thereby assure the smooth realization of the four modernizations and assure the gradual improvement in the people's livelihood on the basis of the development of production.

FOOTNOTES

1. "Complete Works of Lenin," Vol 6, p 37.

2. "Selected Works of Lenin," Vol 3, p 571.

3. "Complete Works of Stalin," Vol 13, pp 318, 316.

4. "Selected Works of Marx and Engels," Vol 1, p 266.

5. "Selected Works of Marx and Engels," Vol 2, p 97.

6. "Problems of Socialist Economy in the Soviet Union," People's Publishing House, 1958 edition, p 30.

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NATIONAL ECONOMIC POLICY

'JINGJI YANJIU' DISCUSSES COMMERCIAL WORK, MATERIAL PRODUCTION

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[Article by Yang Baikui [2799 4102 2247], Beijing University Department of International Politics: "The Labor of Commercial Staff and Workers Is Material Productive Labor"]

[Text] For a long time in the past, socialist commerce and service trades in our country were not developed as they should and, in some cases, were marked by retrogression. Lin Biao and the gang of four pushed their ultra-left line and carried out an economic policy that consciously "restrained commerce." Another important reason for this state of affairs was that people generally had an incorrect understanding of commerce and service trades. Since the gang of four were smashed, things have taken a turn for the better. However, since there is still an incorrect understanding of the fundamental question of theory, there is a question of whether commerce and service trades belong to the department of material production and whether the labor performed by their staff and workers is material productive labor. (The staff and workers referred to in this article mean those other than the administrative personnel. The character of labor performed by administrative personnel will not be discussed in this article.) Comrades working in economic departments and the public are still unable to attach great importance to commerce and service trades while the staff and workers of the commercial department and service trade department are actually not on an equal basis with those of the departments of industry, communications and building in social status and reputation. Undoubtedly this state of affairs will hinder the normal development of commerce and service trades in our country and will adversely affect the growth of the national economy as a whole.

I wish to set forth my views on this theoretical question.

I. According to Marx's Theory of Political Economy, a Considerable Part of the Labor Performed by Commercial Department Staff and Workers Is Material Productive Labor

Commerce is the national economic department engaged in exchanging commodities. Concerning exchange, Marx said: "First, it is clear that the exchange of activities and abilities, which occurs within production itself, belongs directly to it and essentially constitutes it. Secondly, the same holds for the exchange of products, insofar as it is a means of finishing the product and making it ready for immediate consumption. The act of exchange is to that extent comprised in product. Thirdly, by virtue of its organization the so-called exchange between dealers is entirely determined by production, as a productive activity itself. Exchange only appears as independent and indifferent with respect to production in the last stage, where the product is immediately exchanged for consumption." ("Introduction to a Contribution to the Critique of Political Economy," Selected Works of Marx and Engels, vol 2, p 101) Here Marx dwells on four cases of exchange. The first case has nothing to do with commerce. It refers to the exchange of activities and abilities, which occurs within industry, agriculture and departments of building, communication and transport. Generally speaking, such exchanges are not commercial exchanges. But exchanges in the second, third and "final" cases include the total content of commercial activities. On the basis of the three cases of exchange cited by Marx, let us make a concrete analysis of the work done by the commercial department staff and workers in these exchanges and see which is in the nature of material production and which is not.

On the basis of the second case of exchange cited by Marx, it can be seen that all the labor performed by commercial department staff and workers in purchasing and selling raw materials, materials, semifinished products and the greater part of fuels is certainly a material productive labor. Raw materials include those for light industry and the food industry, that is, the greater part of farming, sidelines occupations, forestry, animal husbandry and fishery products. Semifinished products must include the consumer goods that have to be reprocessed before they can be exchanged for "immediate consumption," for example, clothes, raw meat, vegetables, grain and the greater part of nonstaple foods. The reason is that these products must be reprocessed before they are exchanged for "immediate consumption" (this point is not affected by the place of processing).

In addition, let us look at the third case of exchange cited by Marx. The "dealers" in this case are equivalent to the "enterprises" in the socialist relations of production. The exchange between dealers or between enterprises refers mainly to interchange of the means of production between them (this exchange and the exchange in the second case coincide with each other). Marx says that this exchange "itself is a productive activity." Thus, the labor performed by the commercial department staff and workers in exchanging the means of production is certainly labor for material production.

Now let us consider the case "where the products are immediately exchanged for consumption." They should include only those consumer goods that must be immediately exchanged for consumption without being reprocessed. For example, general goods for daily use, clothing, watches, transistor radios, TV sets, bicycles and dried and fresh fruits. Here it is necessary to stress the "exchange" mentioned by Marx, which refers to the pure exchange process, that is, the buying and selling process, and not the entire circulation process. The labor performed by the commercial department staff and workers in the buying and selling process is considerably less than the total labor performed in the entire circulation process. In the entire circulation process, the commercial department staff and workers have to perform labor in transporting (not all transportation is undertaken by the commercial department), packing, storing and processing the commodities (only after performing these kinds of labor can the products become commodities for "immediate consumption.") These forms of labor are a continuation of the production process in the circulation process. For this reason, this part of labor is also labor for material production.

So far we have analyzed various forms of labor performed by the commercial department staff and workers, taking Marx's theory of policial economy as our basis. We have found that a considerable part of the labor performed by the commercial department staff and workers is labor for material production. Below let us examine the remaining forms of labor performed by the commercial department staff and workers.

II. The Labor Performed by the Commercial Department Staff and Workers in the Pure Exchange Process Is Also Labor for Material Production

In addition to the "continuation of the production process in the circulation process--transporting, packing, storing and processing--the commercial department staff and workers carry, clean, sort out and display the commodities; recommend and deliver commodities to consumers; bind and pack commodities; make calculations and receive payments. In this process they change commodities into money and change money into commodities, thus completing the buying and selling process. Are these forms of labor still labor for material production? I think so.

We may make a comparison between commerce and the transport service. The transport service belongs to a branch of material production because "the interchange of matter may necessitate a change of location of products, their real motion from one place to another." (Marx: "Das Kapital" vol 2, People's Publishing House 1975 Edition, p 167) "The use-value of things is materialized only in their consumption, and their consumption may necessitate a change of location of these things; hence an additional process of production in the transport industry may be required." (ibid. p 168) Marx regards the transport industy as an additional process of production because it completes the change of location and place necessary for changing the things into consumer goods. But in actual cases, after transportation of the products the commodities are still not for immediate consumption; they are still some ways away from the consumers and are still concentrated in one place. To realize consumption, it is necessary to perform labor to change their location and place again. The necessity of changing their location and place requires an additional production process in commerce. After completing "the production process in the circulation process--transporting, storing and packing--the commercial department staff and workers perform an enormous amount of labor in carrying, delivering and transporting commodities until finally thev reach the hands of consumers. Such is the main form of labor in the buying and selling process as well as the main part of the additional production process in commerce. Line transport labor, these forms of labor, by changing the location and place of commodities, complete part of the necessary material movement from the processing of commodities to their consumption and change the commodities from possible consumer goods into real consumer goods, thereby increasing the value of commodities. Therefore, this part of labor is also labor for material production. As to the labor for sorting out, displaying, cleaning, binding and packing commodities, it obviously belongs to the category of storage and processing labor and is certainly labor for material production. These forms of labor are another part of the labor performed in the buying and selling process, and another part of the additional process of production. The labor performed in calculating and receiving payments is a sort of accompanying mental labor for completing part of the manual labor, just as the factory workers process machine parts while at the same time studying blueprints, planning the processing steps and methods and taking measurements from time to time. Certainly it is the necessary part of productive labor. In many cases, the job of calculating and receiving payments is done by special commercial staff and workers. This kind of labor performed by other commercial staff and workers is more obviously labor for material production. Therefore, from an actual analysis of the labor performed by the commercial department staff and workers it can be clearly seen that all the labor performed by the commercial department staff and workers is labor for material production.

III. Why Was the Labor of Commercial Staff and Workers Regarded as Nonmaterial Productive Labor According to the Former Theory of Political Economy?

First, the former theory of political economy explained two different kinds of exchange--of "productive activities" and of "products for immediate consumption." But, in the concrete discussion and study of the question of circulation and the question of commodity exchange, it did not make a clear distinction between them. It regarded them equally as the latter kind of exchange, thus imperceptibly neglecting the former kind--"exchange of productive activities." Thus the character of the entire process of commodity circulation was determined according to the character of the latter kind of exchange--commodity circulation.

Secondly, for historical reasons the former theory of political economy failed to see the increasingly important position occupied and increasingly greater proportion of the productive labor perfomed by the commercial department in transporting, storing, processing and packing commodities along with the development of production. It all along regarded this kind of productive labor as secondary, supplementary labor. Thus, it regarded the entire process of commodity circulation and the pure process of exchange (that is, the buying and selling proces) more or less as the same thing. Since the buying and selling process was regarded as a nonproductive process, naturally the entire process of commodity ciruclation was regarded more or less as a nonproductive process.

Thirdly, the former theory did not make a meticulous analysis of the buying and selling process in the light of actual conditions and did not clearly understand that the production process should include the necessary change of position and location of the products. Because of this, it held that the process of buying and selling commodities created no value; hence, it was not regarded as a production process.

Of the three reasons mentioned above, the third one was the crux of the matter. The buying and selling process is the process necessary for various kinds of commodity exchange (including commodity exchange of productive activities). It was mainly on its basis that the former theory of political economy incorporated the commercial department into the nonmaterial production department. It is necessary, therefore, to make a detailed analysis of the basis of the former theory and find out its error so as to expound and prove this question theoretically.

1. The Question of "Buying and Selling Time."

The concept "buying and selling time" used in the former theory of political economy was very vague. It could be understood in two different ways: only as the time the commercial administrative personnel or managers use to "do business" and as various kinds of work time in the buying and selling process, including the time mentioned above. It was on the basis of the assertion that buying and selling time created no value that the former theory proved that the labor of commercial staff and workers engaged in buying and selling activities was nonproductive labor. Below we shall see that no matter how the buying and selling time is understood, all the labor performed by the commercial staff and workers in the buying and selling process is material productive labor.

If the buying and selling time is understood in the first way, then the time the commercial staff and workers actually use to transport, carry and deliver commodities is not the buying and selling time. While proving that buying and selling time created no value, the former theory did not prove that these forms of labor performed by the commercial staff and workers created no value. Thus, these forms of labor time can only be regarded as part of the time to continue the production process in the circulation process. It follows then that these forms of labor are productive labor.

If they buying and selling time is understood in the second way, it would prove the incorrectness of the former theory that "buying and selling time" created no value. It was not correct because it used such business activities of the managers and capitalist as "running around on the market," "speculating," "profiteering" and "bargaining" with independent producers who sold their products to prove that the buying and selling time created no value. From this it can be seen how the former theory overlooked the enormous amount of labor expended in the buying and selling process. It did not make a meticulous analysis of the actual content of the buying and selling process and vaguely used the concept "buying and selling time." Like the capitalists running their factories, those who run their business create no value from their time. This point is irrelevant to whether the commercial staff and workers create value from their time. Like the labor of factory workers producing commodities, the vast part of labor expended by commercial staff and workers always increase the value of commodities. The former theory that buying and selling time create no value was advanced, citing the following examples: the value of commodities does not increase as a result of extending the time through "bargaining" and "sticking to one's position." Buying and selling time is increased by passing the commodities through the hands of speculators but they remain on their shelves. Buying and selling houses do not increase their value. These examples cannot be used to explain the point at issue.

Besides, it frequently happens that an independent producer who sells his products is both the "manager" and the productive worker. Circumstances being complicated, how much of his "buying and selling time" is for "doing business" and how much is for performing productive labor can only be determined according to concrete conditions. The value created by the labor time of independent producers in the buying and selling process is also added to the products, only the magnitude of this added value is small and not so conspicuous when it is expressed in terms of individuals, put together, the magnitude of value added by the labor of commercial staff and workers would be very conspicuous.

2. The Question of "Same Value."

The former theory of political economy holds that the buying and selling process merely changes goods of the "same value" from one form into another, namely, from a commodity form into a monetary one and from a monetary one into commodity one; hence the buying and selling process creates no value. Further, it holds that this conclusion is based on the principle of exchange of equal value. But it must be noted that there the question is fundamentally not one of changing the "same value." As proven above, the time of productive labor in the buying and selling process increases the value of commodities. That is to say, in the buying and selling process, thanks to the labor of commercial staff and workers the value of commodities keeps increasing along with the change of location, place and state favorable to the consumers. This increase stops only when consumption begins after commodities reach the hands of consumers. Moreover, additional labor expended on the commodities in the process of consumption will increase their utility and their value will increase further (this is another question which will be discussed in the ensuing paragraphs). For this reason, both the argument that the "buying and selling process is a formal transformation of the same value" and the argument that the magnitude of value will not change in the hands of buyer and seller" are incorrect. From the latter argument we can see that the former theory had a very vague grasp on the buying and selling process and the buying and selling time. "In the hands of buyers and sellers" is not a correct description of the enormous amount of labor expended by the commercial staff and workers in changing the location , storing and packing commodities.

Only when we come to understand that the magnitude of the value of commodities is not the same from the beginning to end in the circulation process can we correctly explain the real reason the ex-factory price, wholesale price and retail price of a commodity are different. This difference is not a transfer from industry to commerce as the former theory explains. At the time a product leaves the factory its value is what it is and can only be sold according to its value. That is why the ex-factory price is lower. The wholesale department transports, loads, unloads, stacks, keeps and stores the products so they can be sold for consumption. This necessary expended labor increases the value of commodities. That is why the wholesale price based on value will be higher than the ex-factory price and lower than the retail price. Since the retail department will have to carry on the labor expended by the wholesale department and deliver the commodities to consumers, the value of commodities is thus further increased; hence, the retail price is somewhat higher than the wholesale one. Only such an understanding of the different amounts among the three kinds of prices can conform with the essence of the principle of exchange of equal values, that is, the essence of the principle of "buying and selling commodities according to their value." The former theory holds that circulation cost is a compensation made by industry to commerce. It is based on the incorrect argument of the "same value" and, because of this, it is certainly incorrect.

3. The Question of Use-Value.

Material productive labor is labor for creating material wealth. "Use-values constitute the substance of all wealth." "The utility of a thing makes it a use-value." (Marx: "Das Kapital" vol 1, p 48) The former theory understands the use-value of a thing merely as the utility of the form and "quality" of a thing to man, and leaves out of consideration the utility of location and place of a thing to man. Because transportation is the "necessary condition" for completing production and is the "necessary process" of consuming the product, the former theory recognizes that transportation creates value. But since transportation neither increases the quality of things nor changes their quality, the former theory denies that it increases the use-value of things. This separates value from use-value and makes the theory fall into error and contradiction. Marx says: "Use-values are the material depositories of exchange-value." "Nothing can have value without being an object of utility. If the thing is useless, so is the labor contained in it; the labor does not count as labor and therefore creates no value." (Marx: "Das Kapital" vol 1, pp 48, 54) From this passage in "Das Kapital" we may come to the conclusion that if labor is expended on a certain thing without increasing its utility, then this "labor" is useless labor and cannot be counted as labor; hence, it increases no value. It thus can be seen that there are no cases where labor expended on a thing increases only its value and not its use-value. Transportation is counted as production because it adds value, primarily its use-value. This is also true of the labor of transportation and delivery. All these forms of labor increase the use-values and values of things by changing the location and place of things so that they can be put to use or more convenient use. Therefore, from the angle of use-value, the labor of commercial staff and workers is directly shown as material productive labor. At the same time, the unconvincing argument that transportation and move of things in the process of production are a production process because they are the "necessary process" and the "necessary condition" is made untenable.

From the angle of use-value, the productive quality of labor expended by commercial staff and workers in transporting and delivering commodities millions of times is very conspicuous. Through labor, piles and piles of possible consumer goods, whose users are unknown and which are kept in warehouses or placed on goods shelves, are distributed to consumers as real consumer goods and thus their consumption and use can begin. From the angle of the whole society, have not these forms of labor created great use-values? "A product is a product not because it is a materialized activity, but only as an object for the active subject." (Marx: "Introduction to a Contribution to the Critique of Political Economy," Selected Works of Marx and Engles, vol 2 p 94)

A correct understanding of this question will naturally arrive at the following conclusions:

4. The Labor Performed by the Staff and Workers in the Service Trade and Catering Trade Is Also Material Productive Labor.

First, let's look at the service trade. This trade embraces hotels, public baths, barber shops, laundering and dyeing shops, photo-studios and service handicrafts. The staff and workers in the service trade serve production and people's everyday life by performing service labor. The labor performed by the staff and workers in this trade increases the utility of things to man and increases the use-values and values of things. Hence it is also a material productive labor.

For instance, hotel staff and workers perform labor mainly for cleaning and tidying up the objects of consumption and providing foods and drink (providing food and drink is equivalent to the function of the catering trade, which will be discussed in the ensuing paragraphs). The rooms, furniture and bedding will become dirty, disorderly and get worse after consumption and cannot be used further or will not be good for further use, which means loss or partial loss of their use-values. Through labor the hotel staff and workers restore or partially restore the use-values of these things so that they can continue to satisfy people's needs: This is equivalent to processing or reproduction of these things. Just think: If bedding is continuously not picked up and washed, it will no longer serve its purpose after 3 years of use and will have to be thrown away if no processing is done. If it is frequently picked up and washed, bedding can be used for several years or longer. Thus, put together the labor expended for picking up and washing the bedding is equivalent to the production of two pieces of bedding. This work is certainly identical to production in essence. The labor expended for cleaning and tidying up rooms is similar to the labor for picking up and ashing bedding and mending clothes. It remakes things or changes them in such a way as to satisfy people's needs. Hence it is also a material productive labor. Marx says: "A product becomes a real product only through consumption. For example, a dress becomes a real dress only in the act of being worn; a house which is uninhabitated is in fact no real house. In other words, a product, as distinct from a mere natural object, proves itself as such, becoming a product, only in consumption." (ibid. p 94) When a product has lost or partially lost its use-value in the process of consumption and can no longer be consumed, then it is not the product in its original sense. If its utility to man is restored or partially restored through certain labor so that it can be used again by people, then what is the difference between this form of labor and the labor that produces the product? In many developed countries, many consumer goods are "consumed only once." This fact illustrates the productivity of this labor and production. In those countries, many consumer goods will lose or partially lose their utility to man after a period of use and will be thrown away and recycled. In less developed countries, "recycling" mainly assumes different forms or takes place step by step. Thus it can be seen that the labor performed by the staff and workers in the service trade for cleaning, picking up, washing and repairing things is counted as material productive labor. As for dyeing cloth and clothing, there is even less reason to say that it is productive labor in laundering and dyeing plants and not productive labor in laundering and dyeing shops. Photography is a material production department for producing photos, and the labor of the photostudio staff and workers being equivalent to the labor of some workers in printing houses. The greater part of the labor performed by public bath workers is equivalent to that of hotel staff and workers; in addition, they produce hot water for consumption. Haircutting is different from the conditions mentioned above because it involves other questions. It will not be discussed here.

Further, let us look at the catering trade. It is a trade selling processed and cooked foods and drinks and providing facilities and places for on-the-spot consumption, for example, restaurants, wineshops, teahouses and snack bars. They perform three economic functions: production, circulation and service. It has been proven above that the functions of commodity circulation (commerce) and service trades are equivalent to their production function. The three functions performed by the catering trade are then production functions. Certainly the catering trade must be counted as a department of material production and the labor of its staff and workers as material productive labor. "Hunger is hunger, but the hunger that is satisfied by cooked meat eaten with knife and fork is a different hunger from that which devours raw meat with hand, nail and tooth." (ibid. p 95) Herein lies the significance of the productive labor of the catering trade.

The greatest significance in discussing this question lies in gaining a clear idea of the essence of production, thereby really getting a clear understanding of the character of labor performed by the staff and workers in the catering trade.

One's knowledge and understanding of "production" develop along with the development of production. Historically, with production being undeveloped, people for a very long time merely called farming and family spinning and weaving (that satisfied people's physiological needs) production, and did not count circulation and other industry as production. This view was represented by the economic theories of Sun Kuang, Shang Yang and Han Fei in ancient China. They made a distinction between the "root" and the "branch" and proposed "aiding the root and curbing the branch" and even "prohibiting the branch." This view had been upheld by many people until the Qing Dynasty. Subsequently, production and people's needs developed and people gradually discovered that industry, communications and transport could not only satisfy people's ever-growing material needs but also greatly speed up production. Without these "branches" it would be impossible to develop the "root" on a great scale. At that stage people saw their importance and counted them as the "necessary condition" or the "necessary factor" in production but still did not regard them as on equal footing with agricultural production. The Western physiocrats of the 18th Century and Yen Fu at the end of the Qing Dynasty represented this understanding in their era. Along with further development and expansion of production and people's needs, the importance of industry, communications and transport and their proportion in the entire economy are brought into an ever striking relief and are then universally recognized as a branch of production. The unprecedented development of modernized production in depth and breadth is bringing into ever striking relief the productive character of labor performed by the staff and workers in commerce and service trades. Their important position in social production is increasingly recognized and it is necessary to get a clear idea of the character of the labor performed by the commercial staff and personnel.

That commerce and the catering and service trades become independent economic departments is dictated by production and division of labor arising from the development of social production. At the stage where production was undeveloped, many production processes were completed by individuals or single production units in the total process of production, or were completed by "nonproductive personnel" in "nonproductive hours." Such an example is found in industrial production. Cooking foods and sewing dresses were not counted as production in the past. Subsequently, they were changed from supplementary family labor into specialized and centralized labor and recognized as production. It is the labor performed by the workers of foodstuff and clothing factories. This "housework" has grown into a great production trade. A comparison between an individual agricultural producer (owner peasant) and a modernized system of agricultural production will clearly show what has taken place between them.

An individual agricultural producer delivers seeds and manure from his home to the field and through his labor transports his harvests from the field to his home. Then he processes his grain and cooks his rice and flour into food. Further, he spins cotton or sheepwool into yarn and threads, weaves them into cloth, cuts the cloth into clothing, slaughters his livestock raised during his sparetime, makes meat foods and then consumes the foods.

In the case of an individual agricultural producer, labor is divided among members of his family and production and consumption are scattered. The objects of labor and the instruments of labor lie near his home, with his things separated from those of other individual producers from the beginning to end. How about modernized agricultural production? The seeds company, breeding stock company and fertilizer company spread seeds, young animals and fertilizers (produced in a centralized way in other localities) among the agricultural producers or production units that are separated by a great distance from one another. The agricultural producers or production units perform labor to produce their cereals, cotton and livestock. The purchasing department collects the scattered farm and animal products and transports them to the grain processing factory, textile department and animal products processing department. It is probable that the raw materials collected by these departments are provided by many different purchasing departments. They process these raw materials and then transport the products to foodstuff or clothing factories for processing. The wholesale commercial departments gather together the foodstuffs and clothing from many different foodstuff factories and clothing factories, combine them and spread them over retail stores. The retail stores then deliver the consumer goods separately to farm workers or their families. This process is a centralized, large-scale process of production based on social division of labor. The objects of labor must be scattered, centralized, scattered again and centralized again and moved over a long distance. This dispersion, collection, centralization and large-scale move of things over a long distance are precisely an extension and development of the small-scale, inconspicuous move of small quantities of things in the process of production. According to the former theory, the latter would also be counted as a production link. Now these production links are centralized and specialized. This constitutes the content of labor performed by the staff and workers in the commercial department and the catering trade and some staff and workers in the service trade.

The more elaborate the division of labor in production, the greater the degree of centralization and specialization. The more commerce, catering trade and service trade are developed, the greater their "fields of operation" (the work of other departments is now done by them). The emergence and development of these trades increase the labor productivity of those production functions which were originally scattered or performed "incidentally" and are not centralized in their hands. They also increase the labor productivity of the whole society and enlarge the sphere of production. Therefore, under conditions of commodity production, commerce, catering trade and service trade may even be taken as a mark of social production. The more they are developed the more social production as a whole is developed.

Viewed from the angle of economic activities, the sphere of commodity circulation is actually an important one included in the sphere of production; but in order to study people's social relations and certain concrete economic problems, it is imperative to mark out this sphere.

A discussion of the question of whether the labor of commercial staff and workers is productive labor is also of significance because, with this question thrashed out, many complicated theories of political economy can be simplified, certain contradictions overcome and the theories of political economy made more unified and consistent.

A correct understanding of this question will produce multiple effects on our concrete economic work. For example, the commercial department may, according to the law of value and on the basis of the work of its staff and workers, calculate the circulation cost, consider commodity price and the question of less profit and more sales, and draw commercial profits.

As stated at the outset in this article, the realistic significance or discussing this question is that it may help our commerce, catering trade and service trade develop at a proportionate rate and play their part in accelerating the four modernizations and raising people's living standards.

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NATIONAL ECONOMIC POLICY

COLLECTIVE ECONOMY IN CITIES, TOWNS DISCUSSED

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[Article by Zhuang Qidong [8365 0796 2639], Shen Jiyan [3947 4764 6056] and Wu Yan [0702 1484] of the Economic Research Institute of the State Economic Planning Commission: "The Economy of the Collective Ownership in Cities and Towns Must Be Developed Energetically"]

[Text] The economy of the collective ownership in cities and towns that began to emerge after the founding of new China has continued to develop from a lower to a higher stage. It has now become a major part of our socialist economy. The number of collective industrial enterprises (including those run by people's communes) was three-fourths of the country's total industrial enterprises in 1978, with total workers coming to one-third and production value to one-fifth. These collective enterprises have played an important role in our economy. But this collective economy was labeled by Lin Biao and the "gang of four" as a "tail of capitalism" and they exercised the policy toward it of "utilizing, restricting and reforming." Such a policy was, in fact, set for handling the bourgeoisie. As a result, the economy was seriously hampered. Following the downfall of the "gang of four," our collective economy has gradually turned to the better thanks to the reimplementation of correct party policies. But in order to develop the economy energetically of the collective ownership in cities and towns and speed up the four modernizations, it is imperative to clarify the vague ideas of many comrades toward the economy, further implement party policies and solve difficulties as quickly as possible.

I. To Develop the Economy of the Collective Ownership Is a Need of Objective Economic Laws

It is generally known that the economy of the collective ownership has socialist features. Lenin said: "Under the conditions in which the public ownership of the means of production exists and the proletariat have won over the bourgeoisie, the system of civilized cooperative workers is the socialist system."

But instead of making concrete analyses, some people indiscriminately praised the ownership by the whole people that has developed from small to big collective as making "progress" and "advance," labeling the collective enterprises and collective economy as "retrogression" and "restoration." Such ideas are wrong.

Marxism holds that the relations of production must be in line with the development of productive forces because it is an objective law independent of man's will. The only criterion for judging whether a social system is advancing or regressing is to see whether it accords with the need in the development of productive forces. If a social system promotes productive forces, it is an advanced system; if it hinders the development of productive forces, it is then backward or even reactionary. Marx said in "poverty of philosophy": "A society headed by feudal lords is the product of handoperated mills while a society headed by industrial capitalists is the product of steam-operated mills." What kind of "mill" will give birth to a socialist society then? Engels said in "The Principles of Communism": "Big industry and its feasibility of ultimately expanding production enable people to set up a social system. Under such a system, abundant necessities of life will be produced so that each member of the society will be able to freely develop and display his whole energy and talent." Such are the tentative ideas of Marx and Engels about a new society and its preconditions.

If we compare with old China, our productive forces no doubt have developed drastically. But if we compare our economy with economically advanced countries in the world, the level of our economy is still very low. Our economy lags far behind the development of the productive forces which, as Engels cited, "will produce abundant necessities of life..." To change such a backward situation, we must proceed from reality and form a production method that is in line with the level of our productive forces.

According to the principle that the relations of production determine the level of productive forces, the following two questions merit our consideration:

First, the growth of the economy of the collective ownership that has developed from a small to large collective in changing into the ownership by the whole people must accord with the development of productive forces.

We have traveled a tortuous path in this aspect. The collective economy in cities and towns developed energetically before 1957 thanks to a series of correct party policies. In 1958, there was a tendency that affected the transition to communism prematurely, coupled with an emergence of egalitarianism and indiscriminate transfer of resources. Such a situation in fact abolished the collective ownership, seriously hampered the initiative of the masses in production and inflicted heavy losses to the collective economy. Practice proved that higher stage of public ownership did not always follow with more advantages. On the contrary, once the relations of production exceeded the level of productive forces, they spoiled the productive forces; the more they exceeded the later, the more serious was their destruction.

Second, simultaneous development of the collective economy in cities and towns and the economy of the ownership by the whole people is the only correct way that accords with the level of our productive forces.

It is generally known that the pace in the development of production is decided by the amount of social accumulation which has a certain limit. According to the experience of our country over the past many years, it is more sensible to keep the accumulation rate at 25 to 30 percent of the national income. If the rate exceeds this figure, it will have a wide effect. Judging from the present level of our country's production, we can just maintain such an accumulation rate. Therefore, if we solely rely on such a rate, we will not be able to quicken the development of production, nor will we be able to solve the problem of the great number of unemployed. Apparently sole reliance on the economy of the ownership by the whole people will not benefit production. To quicken the development of production we must make additional use of the power of the collective economy and its accumulation. Such a measure is in line with the present low level of our productive forces and in fact is an objective reality that cannot be changed by man's will. The ideas that regard developing the collective economy as "retrogression" and "restoration" apparently run counter to the need of quickening the development of the national economy.

II. The Collective Economy in Cities and Towns Is Indispensable and the Only Way To Quicken the Development of the Socialist System

A huge population and weak foundation are the two features of our economy. It is because of these features that while we are developing the enterprises of the ownership by the whole people we are also energetically developing the enterprises of the collective ownership because this is an important way to carry out the four modernizations with greater, faster, better and more economical results.

The collective economy has many advantages:

First, the enterprises of collective ownership give quick returns with little investment. They are usually built simply, thriftily and self-reliantly and are therefore more easy to make investment achievements. For example, a roundhead small nail manufacturing cooperative in Ningbo turned to specialize in producing steel cable in 1976 to meet the demand in fishery production. They spent 600,000 yuan to build a workshop by themselves and purchase equipment. Consequently, they built a factory that is capable of producing 2,600 tons of steel cable per year, with the profit in 1978 being more than 3 million yuan.

Second, the business of the enterprises of the collective ownership is closely related to the material interest of the workers. Such enterprises have done away with the shortcomings of "eating out of the same rice pot" and eating out of an "iron rice bowl," which are characteristic features of the state-owned enterprises. All the people in the enterprises of the collective ownership are very much concerned with their production, the quality and sales of their products as well as their income. The workers of the Wucheng sofa and wooden furniture cooperative of Kunming are always ready to serve their clients. They often repair sofas and furniture in owners' homes and work through the night to complete urgent jobs. Every day after their work they pick up scattered nails on the ground with magnets. This cooperative, which was started by their housewives as a sofa repair point, is now able to produce sofas, back cushions, furniture and car top covers. Over the past 7 years, it has paid tax and handed profit over to the state in the amount of 280,000 yuan, while its accumulation and floating assets have come to about 600,000 yuan.

Third, the enterprises of collective ownership, which are small, use a simple processing technology and equipment and have a flexible organization. Therefore, they can easily adjust their production to meet market demands. For example, the Lianzhou neighborhood bulb plant of Guangxi Province carried out market investigations and produced small bulbs for fishermen, car lamps and nearly a dozen types of lamps that are in good demand abroad. Its production value in the first half of this year was 34.4 percent higher than the same period last year. Neighborhood industries in Shanghai trial produced 184 varieties of new products in 1978 in a bid to turn out new products and those in short supply. Their efforts were praised by the masses. The output value in the first half of the year was 81.6 percent higher than the same period last year.

The superiority of the collective economy is that it is full of vitality and the speed of its development generally surpasses that of the economy of state enterprises. The output value of the collective industry of Weihai city in Shandong Province increased 170 times from 1953 to 1978 while the output value of state enterprises only increased by 20 times during the same period. The output value of the Shanghai neighborhood industries recorded an average annual increase of over 20 percent over the past 3 years, while the figure for state-owned industries during the same period was only about 7 percent. Thus, experience shows that if a good job is done for the collective economy in cities and towns, this economy will develop rapidly.

The economy of the collective ownership cannot only develop rapidly but can also play an important role in developing the national economy.

First, to develop the collective economy is an important way for supplying accumulations to the state. For example, the collective enterprises under Shanghai's No 2 light industry system paid tax and handed over profit to the state to the amount of 127 yuan for per 100 yuan fixed assets, one-fold higher than the average industrial level in the city. The collective industry of Ningpo City accumulated 202 million yuan for the state in 1973 to 19 This figure equaled the total present fixed assets and floating capital of the city's state-owned industry.

Second, to develop the collective economy is an important source for the income of foreign exchange. For example, our handicraft and art works have a long history and many places have their own traditional products that have enjoyed high prestige in the international market because of their artistic creation. These products have been our traditional exported goods that bring in a great amount of foreign exchange. The total export volume of our handicraft works now makes up about 15 percent of the total export volume throughout the country. The figures for Fujian and Zhejiang provinces are as high as 30 and 20 percent respectively. The number of collective enterprises in Shanghai that are producing export oriented products is 104, with each worker on the average creating more than $4,000 foreign exchange in 1978. This shows that the collective economy has enormous potentials for creating foreign exchange.

Third, to develop the collective economy is an important measure for solving unemployment and meeting the needs of people's life. State enterprises throughout the country on the average employ one worker for every 10,000 yuan fixed assets as against 4.2 workers for collective ownership enterprises. One-half of the commodities marketed throughout the country are collective industry handicraft products. The proportion of the collective economy in service trades is even much higher. To develop the collective economy, find more ways for employment, produce more varieties of manufactured goods for daily use and expand service items are very important to social stability and unity and for improving the people's life.

The whole party and nation have responded to the call of the party Central Committee and have been concentrating their efforts in carrying out the four modernizations construction. To do a good job in this construction, we need funds and social conditions of stability and unity as our premise. Therefore, to develop the collective economy is not only indispensable but also a big undertaking that is related to our four modernizations. While we are developing the economy of the ownership by the whole people and paying attention to making this economy play its key role, we must also strive to develop the collective economy. Such a measure is not only in line with the feature and the need in the development of our economy but is also an important link for our industry to develop along its own road.

III. The Collective Economy Is Not a Trifle, It Has Bright Prospects

Some people believe that since we are gradually realizing the four modernizations, the economy of the collective ownership that is comprised of hand-operated small factories and cooperatives has no future and is not worth doing. Such thinking is wrong.

First, the demand of basic socialist economic laws has opened up a wide field for the economy of the collective ownership.

According to the basic principle of Marxism, the main features and demand of basic socialist economic laws are that socialist production must continue to grow and improve on the basis of high technology to fully meet the ever-growing material and cultural needs of the whole society. Thus, the goal of socialist production is to fully meet the material and cultural needs of the whole society. Our commodities today are far from abundant; on the contrary they are still very few. A great number of people remain unemployed.

However, nobody undertakes the production of many daily necessities and many service items have yet to be provided. For instance, quite a number of light industrial products such as soap, leather shoes, furniture, bicycles, knitting wool, roundhead small nails and wire have long been in short supply. Many cities do not have enough restaurants, tailor shops, hotels and repair services. For example, there were 10,200 restaurants in Beijing in 1949 but now there are only 679; the number of tailor shops is now 162 as against 3,546 in 1953 and the number of bicycles and shoe repair points has dropped from 2,100 in 1956 to the present 340. Such problems have brought inconveniences for people's basic necessities of life. To change such a situation demands a lot of work. With the development of production and people's life, the people will have to demand more for their daily life. Yet such demands can only be met by the development of the collective economy. In fact, to meet the various demands of the masses, we have to organize the whole social power. Therefore, to develop the collective economy is not an expedient measure in readjusting the national economy and in solving unemployment. To develop such an economy is indispensable to meeting the present stage of the basic socialist economic law.

Second, with the development of industrialization, the ratio of the number of staff in service trades will continue to increase.

The ratio of the number of staff of commerce and service trades in advanced countries is now generally more than one-third of the total employment. For example, the figure for the United States is 36.5 percent, Japan 41.7 percent and West Germany 40.7 percent; the figure for our country in 1977 was only 2.6 percent (using different specifications). Following the development of the four modernizations, the ratio of the service trades will also increase. It is most proper for such trades to have the form of collective ownership.

Third, the industry of the collective ownership is an indispensable force in modernizing industry.

1. Big industry needs cooperation. Experience in many countries has proven that the bigger the industry is, the more medium and small industries it needs to serve itself. For example, the structure of Japanese industrial departments is composed of a pyramid-type structure of contracts, subcontracts and sub-subcontracts. At the top of the pyramid are a few modernized big enterprises while the bottom is made up of a great number of small enterprises with simple equipment. Such small enterprises now have become an indispensable part of the whole modern industry. Many cities in our country have this experience.

2. Big industry has to replace its production, and the production of the original products has to be shifted. The industry of the collective ownership can take over from big industry the production of some products that do not require high technology. In this way, the big industry can concentrate its efforts on turning out high quality and sophisticated products.

3. The bits and pieces of material leftover by big industry have to be handled and utilized. Such material has a great potential and can be mass processed into daily necessities of life.

4. Big industry is probably not suitable for making small quantities of products which should be produced by collective industry.

5. Following the development of industry, industrial departments have used more equipment, with the number of industrial products for daily use also increasing. As a result, more repair services are needed. Such services are another important task for collective industry.

The above situations show that during the four modernizations, the role of the economy of collective ownership will remain important for quite a long time to come. This means that the collective economy has a bright future and will exist for quite a long time together with the state economy during the historical period of socialism.

IV. Some Important Problems Must Be Solved in Developing the Collective Economy

For quite a long time, some units and comrades have had a wrong understanding of the collective economy. Therefore, when they carry out their work, they neglect the autonomy and ownership of the enterprises of collective ownership. They have also defined various policies to restrict such enterprises and prejudiced them politically. All this has seriously affected the existence and development of collective enterprises. Therefore, to fully display the advantages of the collective economy, meticulous measures should be taken to solve the following problems.

1. Insure the management autonomy of the collective economy.

At present, some departments have managed collective enterprises the way they do state-owned ones. Production planning and targets are decided by higher management departments while the purchase and marketing of the products as well as the income and expenditure are monopolized by the state. Some departments have prematurely turned small collectives into large ones to carry out centralized management. As a result, collective enterprises have lost their production and management autonomy, which has hampered the initiative of the workers. A number of collective enterprises have suspended their production and gotten less or even lost profits. Investigations into Xian show that the Fuxin smelting plant has developed each year since it was set up in 1966. Output value in 1976 was 3.42 million yuan, and profits 330,000 yuan. The plant was later turned into a big collective in 1977. Its profit dropped to 161,000 yuan 2 years later. Twenty-two units in Xincheng district of the city were turned into a big collective in 1978, but the total profit of the same year was 114,000 yuan less than 1977, a drop of 7.3 percent. It is apparent that to develop the collective economy, all wrong measures must be corrected and the collective enterprises have more autonomy. It must be defined that the collective enterprises must have the right to handle and use their means of production and labor power; they must have the right, under state planning, to work out their own planning and arrange their production according to their specific conditions and to handle their labor achievements after they have met taxes; and the workers of such enterprises must have the right to elect their cadres of various levels. As long as such enterprises are insured of these rights, they can fully display their initiative and role in our socialist economic construction.

2. Meticulously implement the principle of distribution according to work and increase wages and improve welfare of the workers of the collective enterprises.

The present wages of the workers of collective enterprises are generally lower than those of state-owned enterprises whether the former are doing a good business or not. The monthly wage of a grade-2 worker of the Beijing Xuanwu District Foundry, which is collectively owned, is 35.5 yuan against 41.5 yuan of the same grade worker of the state-owned Beijing machine repair plant. The workers of the collective enterprises also have different labor protection facilities. Many places do not exercise a labor protection policy and do not have a retirement scheme or a separation pay system. The number of labor protection facilities, subsidies for high temperature operation and a standard of staple and subsidiary foods are also different. As a result, the workers of the collective enterprises do not feel at ease with their work. Some have said they "have taken the right road but joined the wrong trade," that the collective enterprises have a "black signboard and no future." Such situations have affected the workers' initiative and production. From now on, collective enterprises must be permitted to decide the wages of their workers, award methods, welfare schemes and facilities and other living conditions of the workers by themselves according to their business conditions and profits. The workers of collective enterprises that have done good business and made a profit may have higher wages and better welfare than their counterparts in state-owned enterprises to implement the principle of distribution according to work and more pay for more work.

3. Correct irrational policies.

The collective enterprises have been treated unequally both politically and economically over the past many years. For example:

First, they have been treated unequally in politics and the distribution of workers. In some places there is even a stipulation to the effect that some reports and documents are to be circulated among cadres of state-owned enterprises, but not those of collective enterprises. The cadres of collective enterprises are even banned from exchanging experiences with those of state-owned enterprises. After government cadres have been transferred to collective enterprises, they will no longer enjoy the treatment of government cadres. The workers of the collective enterprises cannot be promoted to cadres. As a result, the management of the collective enterprise is weak, with many cadres having little education and low management capability.

The government does not assign university and college graduates to work in collective enterprises. Therefore, such enterprises have very few technicians. The number of technicians in enterprises under the Shanghai light industrial bureau is only 1.04 percent of the total workers, with the figure for the enterprises under the second light industrial department of Shandong Province as low as 0.35 percent. Thus, with a weak technical force, it is difficult for collective enterprises to improve their equipment and use advanced technology. Such situations have seriously affected the improvement of technology and products.

A number of restrictions in recruiting workers have been set up against collective enterprises. For example, collective enterprises in Beijing can only recruit workers from among housewives, idle workers, the sick and the disabled. Some enterprises cannot carry out their production normally because they have too many sick and disabled workers. The Xuanwu district chain factory makes coal mining equipment, which requires strong workers who have mastered certain technology. But most of the workers, up to half, who have been assigned to work in this factory are sick and disabled. This seriously affects production.

Second, a short supply of material and too tight of restrictions in the sales of products. It has long been a practice to supply material to "enterprises of the ownership by the whole people first and then to collective enterprises." The material supplied to collective enterprises is not enough, with the supply of raw material, equipment and power not guaranteed. The specifications of their products do not meet requirements. Only less than one-half of the products of the No 2 light industry system throughout the country is included in planning according to its production value. On the other hand, such enterprises have to find by themselves the material needed for their products that are not included in the planning, the standard for the supply of the products that are included in the planning is also not complete. Only part of the bulk of their daily-use industrial products are included in the plannings of provinces, municipalities and autonomous regions, with most of the assignments for making such products assigned by higher departments. However, no material is supplied. In some regions, the raw materials that are distributed to the collective enterprises have been used by state-owned enterprises. As a result, a number of collective enterprises have sent many staff to find material for half of their products. They have to purchase such material through the back door and with higher prices even if the material is of low quality. This has resulted in higher costs and lower profits. In addition, the enterprises have suffered losses which have seriously affected production.

A number of collective enterprises have sold their products that are not purchased by the state and trial-made new products by themselves. Experience has proven that such sales methods are not only in line with the features of collective enterprises but are also convenient to the masses. Through such methods, the enterprises can directly know what the customers have to say about their products and therefore they will be able to improve the quality of their products and management. But such methods were abolished during the Cultural Revolution and basically have not been rehabilitated today.

Third, too much tax and too heavy a burden for the enterprises. The tax policy now exercised by collective enterprises was defined by the State Council in 1963. The highest industrial and commercial tax is 38 percent; the highest income tax for cooperative shops is 60 percent, and the highest tax for handicraft cooperatives is 55 percent. But in many places, the tax rates are even higher than the rates set by the state. In addition, the collective enterprises also have to pay the local authorities planning and management fees as well as contribute to the construction planning fund. Thus, over 80 percent of the profits that the enterprises make in a year through hard labor is taken away, leaving only about 20 percent for themselves. The Hebei paper plant in Liaoning Province made a 480,000-yuan profit from 1975 to 1978 but spent 81.4 percent of this for industrial and commercial tax, income tax and planning and management fees; the remaining 18.6 percent was for its own use. A chain manufacturing plant in Harbin made 534,000 profit in 1978, but 96.4 percent was spent on tax and air defense projects and for contributions to the superior administrative bureau. The retention for the plant itself was only 19,400 yuan, just 3.6 percent of the profit.

In addition, many places have also set their own additional policies for collective enterprises. These include cash awards for the staff of neighborhood offices and fees for preparation against war, support of agriculture, sports games, target practice for the armed forces and prevention of floods. Many departments have asked for the money from the collective enterprises while their resources have been indiscriminately transferred. As a result, the collective enterprises have found it difficult even to repair their equipment, not to mention adding new equipment, building and repairing their workshops or building dormitories for their workers. All this has affected their production.

Fourth, state enterprises have taken advantage of the collective enterprises through cooperation. The regulations set by the state departments concerned for the cooperation between big and small factories are far from complete, causing many irrational phenomena. In some cases, most of the profit from processing work has been taken by big factories. An example is the knitting team of Shoupohutong Lane in Beijing which is processing nylon shirts and trousers for the fourth knitting plant, from production up to packaging. But it only gets 0.16 yuan out of the 0.80 yuan profit from processing each shirt or pair of trousers. In some other cases, the processing fees given to small factories are too low. In this way, there is virtually no profit for collective enterprises. An artificial flower twisting team in Beijing is processing the buds for silk flowers and gets 0.005 yuan per 100 buds. Some processing fees are not fixed. While a collective enterprise has improved its productivity, a related big factory will then lower its processing fee. The fifth comprehensive processing plant of X[illegible]n Street in Beijing had an average processing income of 4,800 yuan [illegible] from processing transformer coils for a low voltage electric appliances plant. But the plant later thought that the income of the processing point was too high. From September 1979 the processing fee was cut down. As a result, the average monthly income of the processing point has been lowered by 30 percent. All these phenomena have seriously impaired the economic interest of collective enterprises and affected the development of the collective economy.

The above-mentioned situations show that rational regulations with regard to the political treatment, distribution of workers, supply of material, sales of products, taxes and cooperation between big and small factories for the interest of the collective enterprises are urgently needed.

4. Solve the new problems of the newly built production and service cooperatives.

Since this year, a great number of unemployed youths have been assigned to work in newly built production and service cooperatives (teams) in many cities and towns to promote markets, enrich the people's life, solve social unemployment and rapidly promote the development of the collective economy.

But in some provinces and municipalities it is stipulated in "on some stipulations for the enterprises of collective enterprises in cities and towns" (trial draft) that "the length of service of unemployed youths must be counted from the time they join collective enterprises. The length of their service will not be affected when they later join state-owned enterprises." Such a policy has positive factors for building cooperatives but it also has side effects in consolidating and developing the cooperatives. Many people believe that since the youths who are employed with the cooperatives are permitted to join state-owned enterprises, the employment with cooperatives is not formal, but a transition or springboard for other employment. As a result, many cooperative members are not stable in their thinking, calling the cooperatives "waiting rooms" and "transfer stations." They are looking for opportunities to work in "big collective" enterprises or enterprises owned by the whole people. Now each time a state-owned enterprise recruits workers, the cooperatives are affected. For example, a tea house in Qianmen, Beijing trained 10 cadres of team leaders and higher position, but they all joined state-owned enterprises this year. Without those cadres, it has been very difficult to manage the tea house, which since then has had a difficult time continuing its business. Some cooperatives have been closed down because their members have joined state-owned enterprises. For example, a wood furniture processing team in Beixinqiao, Beijing, had five members with quite good skills and been welcome by the masses. But it was later closed down as all its members joined state-owned enterprises.

Young members of the cooperatives are not stable in their thinking. This has affected the initiative of neighborhood veteran cadres and veteran workers of collective enterprises in organizing and training young people, and affected the consolidation and development of the production and service cooperatives.

The most important measure to solve these problems is to do well in treating the collective economy both politically and economically. On this basis, it must be defined that working with a collective enterprise is a formal job. It is only in this way that the collective economy can develop.

As has been mentioned above, while we are undertaking the four modernizations, it is imperative and totally possible to develop the economy of the collective ownership in cities and towns in a big way. But such development will eventually bring about a series of changes in the superstructure, meet with resistance from various quarters and give rise to various problems. We must, therefore, work hard to publicize the significance and role of developing the collective economy in cities and towns and solve any problem that may happen any time. It is expected that the collective economy will grow along the development of socialist modernization and become an indispensable force for it.

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ECONOMIC JOURNAL DISCUSSES ECONOMIC PROPORTIONAL RELATIONSHIPS

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[Article by Xiang Jingquan [7309 6975 3123] of the Economics Department of Hebei University: "On the Proportional Relationships Between Capital Construction and Accumulation and Consumption"--slantlines denote boldface type]

[Text] The relationship between accumulation and consumption is the most important relationship in the national economy. How this proportional relationship is maintained has very far-reaching and profound effects on social reproduction. If the proportion is appropriate, then it will be compatible with the objective requirements of the social reproduction process, the continuous expansion of the scale of construction will be promoted, social production will develop rapidly, the people's livelihood will improve gradually and the achievement of the four modernizations will be speeded up. On the other hand, if the proportion is inappropriate and goes against the objective requirements of the social reproduction process, then the rapid development of the national economy will be hindered and there will be grave adverse effects on the building of the country, social production, the people's livelihood and the four modernizations.

To correctly plan the proportion of accumulation to consumption, we must correctly handle a series of relationships, like those between construction and production, construction and livelihood, the present and the distant future as well as the part and the whole, while we base ourselves on developing production and increasing the national income. One particularly important problem is the correct planning of capital construction. This article discusses the problem of how capital construction affects and poses requirements on the proportional relationship between accumulation and consumption, as well as the problem of how capital construction can be planned to promote and guarantee a proper proportional relationship between accumulation and consumption.

The Relationship Between Capital Construction and Accumulation

Generally speaking, the relation between capital construction and accumulation is that each one affects the other and each one is the cause as well as result of the other. Objective reality tells us that very often the scale and planning of capital construction exerts a greater effect or even decisive effect on accumulation. This is reflected in the following three aspects.

First, the scale of capital construction affects, and to a very great extent determines, the rate of accumulation.

The fact that capital construction exerts such great effects and influences on accumulation is due to the position of capital construction the use of accumulation funds. The accumulation funds in the national income are mainly used for the accumulation of fixed capital assets and the accumulation of circulation capital funds. Of these two, the accumulation of fixed capital assets takes up the greater proportion. This accumulation is realized mainly through capital construction. The larger the scale of capital construction, the more will be the accumulation in the national income (that is, the accumulation rate).

Naturally, a given scale of accumulating also determines the scale of capital construction. That is, if the accumulation rate is high, then the scale of capital construction will be larger, and vice versa. But judging from our country's capital construction practices, the excessively high accumulation rate in the national economy is mainly caused by the excessively numerous construction projects being started and the excessively extensive capital construction front. For example, between 1957 and 1958 the accumulation rate rose sharply from 24.9 percent to 33.9 percent, and the share of capital construction investment in the accumulation funds increased by 93 percent, while the share of noncapital construction expenditures in the accumulation funds increased by merely 17.9 percent. Between the 3d and 4th 5-year plan periods, the average annual accumulation rate increased from 26.3 percent to 33 percent, the share of capital construction investment in the accumulation funds increased by 83.7 percent, while the share of noncapital construction expenditures increased by merely 73.4 percent. Between 1977 and 1978 the accumulation rate rose from 32.2 percent to 36.6 percent, and the share of capital construction investment in the accumulation funds increased by 31.5 percent (with the state's investment increasing by 34 percent), while the share of noncapital construction expenditures increased by merely 29.1 percent. Thus, the large increases in the accumulation rate in the past were all mainly caused by excessively high growth rates of capital construction.

The principles of Marxist reproduction theory tell us that the forms of material items required by accumulation are mainly the means of production. The main material resources required for capital construction are steel, timber, cement and other materials, raw materials, machinery and equipment. Now capital construction is a kind of production activity which "takes away labor forces and means of production for a relatively long time and does not yield any useful products during this time. (Marx: "Das Capital," Vol 2, The People's Press, 1975 Edition, p 396) The process of construction is almost solely a process of consumption (production consumption). A given scale of construction must be insured by a corresponding quantity of means of production, and this is the basic requirement imposed on accumulation. Estimation based on statistical information reveals that 70 to 80 percent of the investment in an average construction item has to be spent on the purchase of the means of production. That is to say, when 10 billion yuan are invested in construction, 7 to 8 billion yuan of the means of production for capital construction must be produced. Otherwise construction cannot proceed smoothly and cannot be accomplished. Thus, the scale of construction affects the accumulation rate not only in the form of value. Capital construction takes up a large proportion of accumulation funds also in the form of material items--most of the things needed by capital construction are those means of production which can only be used for accumulation. In the final analysis, the great effect of the scale of construction on the accumulation rate is a result of the characteristics of construction and the conditions necessary for its accomplishment.

Second, the capital construction plans and the construction work accomplished in accordance with these plans affect, and to a very great extent determine, the condition of accumulation.

Capital construction can be classified according to its nature into productive construction and nonproductive construction. Productive construction includes items of production of the means of production and items of production of the means of subsistence. Different items of construction, upon accomplishment, provide different products for society. Therefore, the final uses (namely for accumulation and for consumption) of the national income that they generate are also different. If productive construction and nonproductive construction are in proportion, and construction which produces means of production and construction which produces means of subsistence are in proportion, then the composition of the products which they supply to society will be well balanced and the portion of the national income used for accumulation and the portion used for consumption will be appropriate. If productive construction items are many and nonproductive construction items few, and construction that produces the means of production is substantial and construction that produces the means of subsistence scanty, then the inevitable result is that there will be too few means of subsistence and too many means of production. Because the means of production are mainly used for accumulation, this will force society to raise the proportion of accumulation and further expand the scale of construction to cope with this anomalous composition of social production. Then the proportion of accumulation will continue to increase.

In recent years our country's accumulation rate has been too high. This is not only due to the excessively large scale of capital construction and overly extensive front which occur each year. This is also due to the fact that the allocation of capital construction funds and the contents of construction have not satisfied the requirements of proportionate development. For example, in the 1st 5-year plan period the investment in productive construction occupied only 71.7 percent, but during the subsequent 5-year plan periods it rose to over 86 percent. Sometimes it even reached

90 percent. On the other hand, the investment in nonproductive construction fell from 28.3 percent in the 1st 5-year plan period to something over 10 percent. Sometimes it was only around 10 percent. Consider the proportions which investments in agriculture, light industry and heavy industry occupied in productive construction. Between 1963 and 1965 the investment in agriculture reached 18.8 percent. In the subsequent years it was only a little over 11 percent. During the 1st 5-year plan period the proportion of investment in light industry to that in heavy industry was 1 to 8. In the past 20 years it has dropped to 1 to 10. Sometimes it even dropped to 1 to 15. The result of such investment is that the products which capital construction supplies to society have mainly been means of production. Consequently, means of subsistence have been in short supply for a long time. Moreover, in each year the planned scale of capital construction has been too large. The means of production have fallen short of the needs. To solve this problem it has been further necessary to start new construction which produces means of production. This situation has existed for a long time. Consequently, the scale of accumulation has remained too large for long periods of time.

Thus, the effects of capital construction on accumulation depend not only on the scale of construction in the current year but also on the allocation of investment and the contents of construction. The future situation of accumulation is determined by the allocation of construction investment, the types of construction items, the results of construction and the composition of the products supplied to society. In addition these effects are far-reaching and long lasting. If they result in an anomalous composition of social products and a continuing excessively high accumulation rate, these cannot be completely corrected in a short time.

Third, the scale and results of capital construction also affect the other parts of accumulation and therefore affect the level of accumulation in another way.

It has been mentioned that apart from the accumulation of fixed capital assets realized through capital construction, the accumulation funds also include a portion of accumulation of circulating capital funds. The size of this portion of accumulation is also affected to a very great extent by the scale and results of capital construction. This portion of accumulation is mainly used for meeting the needs of production at newly built enterprises aside from being used for meeting the correspondingly increased needs for circulating capital funds arising from the expanded production and circulation of the existing enterprises. If this portion is lacking in the accumulation funds, then newly built enterprises cannot start production because circulating capital funds are not available for turnover. Then the role of the accumulation of fixed capital assets cannot be brought into play. Therefore, this portion of the accumulation is directly proportional to capital construction. If the scale of capital construction is larger and there are more new enterprises starting production, then more circulating capital funds are needed. This will inevitably require the whole scale of accumulation to expand. In addition, excessively large scale capital construction will displace the accumulation of circulating capital funds. For many years, many localities and departments have been appropriating the enterprises' circulating funds and the banks' loan funds for capital construction, while the proportion of the circulating fund accumulation under the ownership of the whole people in the total accumulation fund has fallen. These two facts also illustrate from another perspective that capital construction affects accumulation in many ways.

This analysis clearly shows that capital construction affects accumulation tremendously. The high accumulation rates occurring for many years were caused by the excessively extensive capital construction front and the anomalous capital construction structure. Therefore, when one plans construction one must pay serious attention to its effects on accumulation and insure that the scale of accumulation is appropriate. At present, the high accumulation rate must be lowered to a rational level. The capital construction front must be vigorously decreased. The proportions in investment allocation must be earnestly readjusted.

The Effects and Demands of Capital Construction on Consumption

Capital construction not only affects accumulation as discussed above. It also affects consumption and poses requirements on consumption. These facts are reflected by the several aspects discussed below.

First, the scale of capital construction affects the level of consumption.

It has been mentioned that construction investments account for a large portion of accumulation funds. The scale of construction affects the proportion of accumulation funds in the national income. Actually it affects the proportion of consumption funds in the national income. It is so because reciprocality exists between accumulation funds and consumption funds in the allocation of the national economy. If accumulation is greater, consumption will be less, and vice versa. For many years our excessive larger-scale construction and overly extensive front led to excessively high accumulation rates, actually this means that capital construction has displaced consumption so that the proportion of consumption has been too low and the consumption level has risen slowly. This is obvious.

Second, capital construction cannot proceed without consumption. The scale of capital construction must be insured by a corresponding scale of consumption.

Lenin said: "To expand production ('accumulation' in its absolute sense), the means of production must first be produced. To achieve this, the social production sector which produces means of production must be expanded, and workers must be /absorbed into that sector,/ and these workers will /have demands on consumption goods./ Therefore, the development of 'consumption' /follows/ 'accumulation' or /follows/ 'production.'" (Lenin: Collected Works, "A Critique of Economic Romanticism," Vol 2, p 122)

This tells us that construction cannot be adequately guaranteed by the means of production alone. It must also be guaranteed by the means of subsistence. Otherwise capital construction cannot proceed smoothly. Capital construction creates many consumption needs. There are the livelihood needs of the workers of the building and installation enterprises as well as other workers who work on capital construction, including laborers working on public projects, part-time workers and contract workers. There are the livelihood needs of workers who produce or transport materials, raw materials, machinery and equipment for capital construction. There are the livelihood needs of the workers of various departments which serve capital construction, like prospecting, designing, scientific research and preparation for construction departments. There are the livelihood needs of the teaching staff and students who take part in personnel training in the newly built enterprises. There are the needs of the enterprises that carry out or provide services to capital construction, which pay for the purchases of the means of subsistence from their management fees. There is a need for purchasing the means of subsistence with the money paid from land purchase fees, moving fees and young crops compensation fees, which are items of capital construction investment expenditures and so on. If 70 to 80 percent of the capital construction investments are used for purchasing the means of production, then 20 to over 30 percent of them are used for purchasing the means of subsistence. (This is so because that portion used for purchasing the means of production includes wages and management fees paid to workers who produce the means of production. According to investigation results, for some construction projects whose material and equipment costs do not take up a large proportion of the total cost, the portion spent on the means of subsistence constitute up to around 40 percent.) That is to say, every 10 billion yuan of investments must be insured by 2 to over 3 billion yuan of the means of subsistence. This is a very substantial figure in our country's production and supply of the means of subsistence. Any inappropriate planning will inevitably lead to contradictions between accumulation and consumption. For long periods our means of subsistence have been in short supply. There are important relations between this and the fact that the scale of capital construction is too large, its front is too extensive, and that it brings about increasing greater demands on the means of subsistence.

Third, the scale, investment allocation and construction results of capital construction exert great or even decisive effects on the production of the means of subsistence and the scale of consumption.

These effects of capital construction are manifested by the following. 1) The proportion of productive investment in capital construction determines the composition of social production in the future as well as the scale of production of the means of subsistence. For instance, among the investments in agriculture, light industry and heavy industry, the size of the investments in agriculture and light industry affect and determine the scale and growth rate of society's future production of the means of subsistence. If investments in agriculture and light industry are too small and the investment in heavy industry too great, then inevitably the scale of production of the means of subsistence will not be able to cope with the people's need of improving their livelihood and a disproportion will exist in the relationship between accumulation and consumption. 2) The proportion of productive investment to nonproductive investment in capital construction is also an important factor affecting future consumption. Nonproductive construction is mainly the building of domestic houses, hospitals, schools, public facilities and so on. These are an indispensable part of the people's livelihood, just like food, cotton and other means of subsistence. Such construction, like the construction arising from investments in agriculture and light industry, is aimed at satisfying the people's daily needs. Therefore, it is an important factor promoting and insuring a proper proportional relationship between accumulation and consumption. The fact that productive investment is excessive and nonproductive investment too small, that the relationship between "bone" and "flesh" is disproportionate, and that the people's daily needs are not fully catered to, are all due to inappropriate capital construction planning. 3) Capital construction also necessitates purchasing many means of subsistence for use as materials and raw materials for buildings and installations (for example, cloth, paper, leather, metal and rubber and electrical products normally used by households and so forth, which are used in construction projects). Such conversion of means of subsistence into means of production will naturally diminish society's consumption and affect consumption needs. The larger the scale of capital construction, the larger will these effects be. 4) Construction projects need sites, many of which are made available by using farmland. In particular, construction that takes place in the suburban areas occupies mostly fertile farmland. This will affect both current and future consumption. In the current year the use of farmland for construction will reduce the output of agricultural products. In the long run, agriculture will forever enjoy fewer means of production which "function as a production took." (Marx: "Das Capital," Vol 3, pp 879-880) Thus agricultural production will be permanently affected. Our country, in particular, has a large population and inadequate land area, and as a result, such effects are even more conspicuous.

Fourth, the results of capital construction create new consumption needs and exert new effects on consumption.

Capital construction is aimed at adding new production enterprises and service units. When construction is complete additional labor forces are needed to put them into operation. This will, in turn, create new consumption needs and exert long lasting effects on the production of the means of subsistence. These are manifested by the following. 1) When the building of a new enterprise or unit is completed it is necessary to add a corresponding number of workers and staff. More newly built enterprises and units will necessitate more newly added workers and staff and will, therefore, generate more consumption needs. In addition Marx said: "The proportion in which surplus products are divided into variable capital and invariable capital depends on the average composition of capital. Furthermore, the more developed capitalist production is, that portion directly spent on wages will be /correspondingly/ smaller." (Marx: Collected Works, "Theory of Surplus Value," Vol 26-II, p 561). This principle tells us that our country will need more newly added workers and staff compared with technologically advanced countries, because we have abundant human resources, our technology is still rather backward and the degree of mechanization and automation of the newly built enterprises is not too high. Consequently, our consumption needs will be greater. 2) In the long run the workers and staff of newly built enterprises mainly come from the agricultural sector. The fact that agricultural labor forces become nonagricultural labor forces implies that the labor forces that produce grain, nonstaple food and materials and raw materials for light industry decrease. Under the condition that the agricultural labor productivity is fixed, this will affect the increase in the output of society's means of subsistence as well as the scale of consumption. 3) The larger the scale of construction and the larger the number of new enterprises built, the larger will be the proportion of newly added workers in the total number of new and old workers. Under the condition that the increase in consumption funds is limited, this will inevitably affect the improvement in the consumption level of the existing workers, and will be unfavorable to the planning of consumption.

The above analysis clearly shows that capital construction tremendously affects not only accumulation but also consumption. For many years our accumulation has been excessive and consumption inadequate, and a disproportion has existed between accumulation and consumption. One important reason is that the scale of capital construction has been to large and investment allocation has been inappropriate. Therefore, when one plans construction one must not only conscientiously pay attention to the effects on accumulation but also conscientiously pay attention to the effects and demands on consumption. One must promote and insure an appropriate proportion of accumulation to consumption. At present, to readjust the existing disproportion between accumulation and consumption, the key measures are to diminish the capital construction front vigorously and conscientiously readjust the proportion of investment allocation.

How Should Capital Construction Be Planned To Promote and Insure an Appropriate Proportion of Accumulation to Consumption

There are close relations, as explained above, among capital construction and accumulation and consumption and the proportion between the latter two. Therefore, capital construction planning must promote and insure a proper proportional relationship between accumulation and consumption. To achieve this, I think we must grasp three links well. First, we must correctly determine the overall scale of capital construction. Second, we must correctly allocate the proportions of capital construction investments. Third, we must vigorously improve the effectiveness of construction. These three links are explained separately below.

1. On the Correct Determination of the Scale of Capital Construction

The relation between the scale of capital construction and accumulation and consumption is that each one affects and promotes the other. An appropriate scale of construction, for one thing, can enable the accumulation and consumption in the current year to become appropriate, prevent mutual displacement and competition between the two, and insure an appropriate proportion between the two. For another thing, it can help insure the availability of feasible and reliable material, financial and human resources for construction and enable construction to proceed smoothly and the newly built enterprises and units to start production quickly. The construction can fully play an active role in the expansion of social reproduction, the national income will grow more rapidly, and prerequisite conditions for the proper proportional relationship between accumulation and consumption in the next year can be fulfilled. For yet another thing, an appropriate scale of capital construction, on the basis of these good prerequisite conditions, can promote the further rapid development of capital construction itself. Then the role of construction in promoting the rapid growth of national income can further be brought into play and a proper proportion of accumulation to consumption can be maintained permanently. In a word, an appropriate scale of capital construction can enable capital construction and accumulation and consumption to promote each other and to be guided into a beneficial cycle. An inappropriate scale of capital construction will bring about opposite results. First, a proper proportion of accumulation to consumption in the current year cannot be insured, so that the two will displace and compete with each other. Second, the basic conditions for construction cannot be secured. Construction cannot play its active role of raising the national income. Good conditions for achieving a proper proportion of accumulation to consumption in the next year are spoiled. Third, capital construction cannot permanently develop smoothly. Then contradictions between construction and accumulation and consumption will worsen and disproportion in the relationship between accumulation and consumption will perpetuate. In a word, an inappropriate scale of construction will lead to disproportion in the relationship among construction and accumulation and consumption or even lead to a vicious circle.

Inappropriateness in the scale of capital construction means that the scale is either too large or too small. Both situations are bad. But in our history of capital construction the scale has almost never been too small. In general, it has been too large. Therefore, when planning capital construction, one must pay particular attention to the tendency of making the scale too large. Why does this tendency exist? The causes include the pernicious influence of the "ultraleftist" line of Lin Biao and the "gang of four," the weakening of planning work, the fact that the comprehensive equilibrium is not well acheived, problems in the capital construction system like "indulging in excessive collectivist practices" and encouraging competition in investment and scattering our forces, confused management of capital construction, people working not according to proper procedures, and so on. Furthermore, these problems are interlocked. However, the principal problem needs further study and discussion.

I do not agree that the excessive scale of capital construction is mainly due to the existing system of capital construction. Of course, to plan the scale of capital construction appropriately and avoid excessively large scales in the future, work must be done in many aspects, including restructuring the capital construction system. But I think the most important thing is to strengthen comprehensive equilibrium. During the 1st 5-year plan period the same capital construction system as the present one was practiced, but the scale of construction was relatively appropriately planned mainly because the work of achieving a comprehensive equilibrium was done well. During the 2d 5-year plan period large scale mass movements were one-sidedly stressed and a comprehensive equilibrium was neglected. Consequently, the scale of construction expanded rapidly, resulting in serious disproportions between accumulation and consumption. During the 3-year readjustment period, comprehensive equilibrium was strengthened and the capital construction front was drastically reduced. Consequently, the situation of disproportion between accumulation and consumption was quickly reversed. Over the past 10 years or more, because of the sabotage and disruption by Lin Biao and the "gang of four" and the influence of the "ultraleftist" line of "the more capital construction the better," there has been a race to start construction project and comprehensive equilibrium has been disregarded, and the problem of the scale of construction being persistently too large has appeared. Now, again through comprehensive equilibrium, it has been discovered that a serious disproportion exists between accumulation and consumption and that the scale of construction far exceeds the possibilities of our national economic development. As a result, a plan has been put forward to readjust the national economy and reduce the scale of construction. The defects of the capital construction system are an important factor aggravating the problem of the extensiveness of the capital construction front. The system needs to be restructured. But if a comprehensive equilibrium is disregarded even though the system has been restructured, then the scale of construction will still continue to be inappropriate.

To correctly determine on the scale of construction, one must achieve two kinds of comprehensive equilibrium. First, the comprehensive equilibrium of each construction item must be achieved well. The following five things must be made practicable: investment, materials and raw materials, equipment, design and the implementation of work. Second, the comprehensive equilibrium between capital construction and the overall national economy must be well achieved. That is, capital construction must be viewed in the context of the overall national economy. Planning must enable the overall scale of construction to cope with the needs and feasibilities of national economic development. The first kind of equilibrium insures the smooth progress of each construction project. This kind of equilibrium is important because it helps to bring about the second kind of equilibrium. But the second kind of equilibrium is the basis and prerequisite of the first. Without the second kind, the first cannot be really guaranteed. To strengthen the comprehensive equilibrium in capital construction, we must first strengthen the second kind.

How can the comprehensive equilibrium of the scale of construction be correctly determined? Our country has had 30 years of construction practice since the founding of the people's republic. We have both positive and negative experiences and systematic information. Therefore, we can derive many regular patterns and laws. I think that the three principles and the three numerical constraints put forward prior to the Cultural Revolution should be carried out, enriched and developed further. The three principles are: first, the principle of observing the order of priority of production, livelihood, construction in construction planning; second, the principle of observing the order of priority of maintenance and repair, manufacture, construction; and third, the principle of observing the order of priority of tapping potentials, innovation, transformation, new construction. These three principles went one step forward in implementation, in the planning aspect, the party's principle of overall planning and taking into consideration both national construction and the people's livelihood. These principles realized the correct handling of the relationship between production and construction, the relationship between simple reproduction and expanded reproduction as well as the relationship between internally embodied expanded reproduction and externally extended expanded reproduction. The three numerical constraints are as follows: first, generally the proportion of accumulation in the national income should appropriately be around 25 percent. This proportion should not be casually increased without regarding actual conditions. Second, appropriations for capital construction should be around 40 percent of the total fiscal expenditure. This proportion should not be exceeded substantially. Third, the growth rate of capital construction must be based on the rate of agricultural development. In addition, in view of the instability of agricultural production, some room must be set aside in the determination of the scale of construction. Furthermore, the growth rate of the means of production must be taken as the upper limit. The growth rate of capital construction must be lower than this limit. These three constraints were put forward in view of the construction practice at that time, and they were compatible with the requirements of the objectively existing proportional relationships. Of course, many specific principles and numerical constraints still need to be studied. For example, what should be the appropriate level of the investment effectiveness index (namely the ratio of the growth in national income to capital construction investment); I think that the scale of capital construction can definitely be appropriately determined on the whole and the problem of the excessive scale which continued to exist in the past will not occur if we continue to stick to these principles and constraints, take the overall situation into consideration, specifically work out the balance between financial, material and human resources, and leave no gaps in our planning.

2. On the Problem of Correctly Allocating Capital Construction Investment

The correct allocation of investment is extremely important to promoting and insuring a proper balance in the proportional relationship between accumulation and consumption because of the following reason: the direction of investment and contents of construction affect that composition of social products in the near future and exert a decisive influence on this composition in the more distant future, and in turn this composition is the material foundation for accumulation and consumption and determines the proportional relationship between the two.

The correct allocation of investment must be guided by the fundamental economic law of socialism. Capital construction cannot be carried out for its own sake. The past practices of attaching great importance to productive construction and heavy industrial construction while neglecting nonproductive construction, light industrial construction and agricultural construction went against the requirements of the fundamental economic law of socialism. Such practices are the primary reason why construction investment could not be allocated correctly. They are an important cause of the anomalous composition of social products and the disproportion in the relationship between accumulation and consumption. It must be made clear that the aim of our construction is to "insure the satisfaction, to the greatest extent, of society's ever-increasing material and cultural needs and employing the method of continually enhancing and perfecting socialist production on the basis of highly advanced technology." (Stalin: "Problems of the Socialist Economy of the Soviet Union," The People's Press, 1961 Edition, p 30) Capital construction is an important means for insuring the achievement of this aim. This is true for building a domestic house, a shop, a light industrial factory or a mine or steel mill. If this aim is abandoned or neglected, the allocation of capital construction investment will not be guided by correct ideology, the tendency of attaching great importance to production and heavy industry and neglecting livelihood, light industry and agriculture will inevitably occur, and a proper balance in the proportional relationship between accumulation and consumption cannot be attained.

To allocate investment correctly, the proportional relationship between productive construction and nonproductive construction must first be correctly planned. Although nonproductive construction investment is part of the accumulation funds, it is mainly used for more directly satisfying the needs of the people's material and cultural life. It is one important factor contributing to a proper balance between accumulation and consumption.

People liken the relationship between productive construction and nonproductive production to the relationship between "bone" and "flesh." This analogy is very correct and vivid. A man who has bones but no flesh is lifeless. A man with little flesh, though not lifeless, is weak. Only when bones and flesh are in good proportion can a man be healthy, strong and vigorous. In capital construction, if productive construction is excessive and nonproductive construction is inadequate, then things go against the objective requirement that the two must be proportionate, and nonproductive construction cannot satisfy the basic needs of production development and the people's livelihood. Although people want more production, things go against their will, production cannot be increased and the disproportion worsens. If capital construction is to really play the role of expanding reproduction, the "bone" and "flesh" must be compatible.

To plan the proportion between productive construction and nonproductive construction correctly, one must pay special attention to the planning of nonproductive construction. This is necessary not only because in the past nonproductive construction has been neglected for a long time, but also because its share in the total capital construction investment shows an objective trend of rising gradually, and we must pay attention to and master this trend. Below are the reasons for this trend. First, the population is growing. Any nonproductive construction must be based on the size of the population. Every additional person must have a certain living space and the corresponding commercial, service, cultural, educational and medical facilities. Otherwise the per capita living area will decrease and the commercial and service facilities as well as the cultural, educational and medical enterprises will be congested. Second, the people's material and cultural life is improving gradually. This is the result of the superiority of socialism and the aim of our construction. This improvement is reflected in the following: the per capita living area should increase gradually, the standard of houses should be raised, cultural activities and education should be widely popularized, and places for cultural and recreational activities as well as commercial service facilities should increase in number with improved standards. To achieve these, the investment in the construction of these things must be gradually increased. Of course, we must still continue to persistently implement the principle of arduous struggle. The scale and standard of nonproductive construction cannot depart from the level of development of production. They cannot be increased and improved blindly and too rapidly. But under general conditions, the investment allocation must reflect this trend. Third, the development of science, culture and education is going to be accelerated. According to the experiences of economically developed countries, science, culture and education must take the lead if the economy is to develop. If our country's economy is to be greatly developed and the four modernizations are to be accelerated, the development of science, culture and education must be accelerated. Relatively greater increases in the investment in these areas is, therefore, required. Fourth, commercial and service trades are going to expand. According to the experience of economically developed countries, commercial and service trades expand continuously along with the following: the development of production, science, technology, culture and education, the many varieties of needs arising from the improvement in the people's livelihood, the expansion of the scope of consumption, and progress in the socialization of domestic labor. Our country will inevitably follow this trend. This will require construction in this area to continuously increase. Fifth, municipal construction will expand gradually. Along with the development of production and nonproductive trades, municipal construction and public welfare facilities must correspondingly increase. The standard of construction will also gradually improve along with the progress of modernization. Furthermore, in the long run we must also advance toward the goal of diminishing and eliminating the differences between the city and the rural areas. Thus, the investment in the construction of new municipalities will also gradually increase. Sixth, we must clear past debts. A past debt from nonproductive construction has been accumulating for over 20 years. Now this old debt should be gradually cleared under the principle that new debts are not incurred. Increments to nonproductive construction investment should be added every year. In conclusion, from now on the proportion of nonproductive construction investment will inevitably increase. During the 1st 5-year plan period, nonproductive construction accounted for

28.3 percent of the total capital construction investment. If this proportion is appropriate, then I think from now on in our planning we should gradually attain this figure again, and we must also appropriately go beyond this figure in a planned way.

In productive construction investment, the correct determining of the proportions of investments in agriculture, light industry and heavy industry is the key to promoting and insuring a proper proportional relationship between accumulation and consumption. For a relatively long time in the past, there has been a trend of emphasizing heavy industry in our investment. In view of this, I think that over a certain period of time, we must pay special attention to increasing the investment in agriculture and light industry to speed up the development of these two sectors. Among our country's agriculture, light industry and heavy industry, the proportion of ownership by the collective is large in agriculture, the proportion of ownership by the whole people is large in heavy industry, and both kinds of ownership occupy a substantial proportion in light industry. The forms and sources of accumulation in constructive investment are not the same for these three sectors. The amount of investment in their construction projects is different (generally heavy industrial items need heavier investment than light industrial items). The length of time needed for constructing their projects is different (generally light industrial items need a shorter time to complete than heavy industrial items). Because of all these differences between the three sectors, it is very difficult to arrive at an appropriate proportion between the investments in agriculture, light industry and heavy industry. Then, how can the proportion between the investments in agriculture, light industry and heavy industry be planned well? I think the following five criteria should be taken as the yardstick of good planning.

First, agricultural and light industrial construction satisfy the needs arising from planned population growth. This is the most basic requirement and is the basic indication of whether the proportional relationship between accumulation and consumption is proper or not. Second, agricultural construction and light industrial construction can satisfy the needs for planned improvement in the people's livelihood. This is specifically reflected in the increase in the per capita quantity of the principal means of subsistence every year. This increase reflects the aim of socialist construction and also indicates whether or not the proportional relationship between accumulation and consumption is proper. Third, the national income and fiscal revenue can enjoy sustained and relatively rapid growth, which does not slow down. Agriculture is the foundation of the national economy and "is an important source of accumulation." (Mao Zedong: Selected Works, "A Talk at the Conference of the Party Committee Secretaries of the Provinces, Municipalities and Autonomous Regions," Vol 5, p 361) As for light industry, the construction is rapid, the profits are high and the investment can be earned back in a short time. Because of these, agriculture and light industry affect the national income and fiscal revenue tremendously. If the investment in agriculture and light industry is appropriate, the national income and fiscal revenue can enjoy a relatively high annual growth rate, as in the 1st 5-year plan period, promoting the proper balance in the proportional relationship between accumulation and consumption. If investment allocation favors heavy industry, then the growth rate of the national income and fiscal revenue will continually slow down, as in the 1970's, so that the proportional relationship between accumulation and consumption is not well balanced. Fourth, the equilibrium in the supply of commodities in the market and the equilibrium in the supply of the means of production can be maintained. This is also a reflection and a requirement of the proportional relationship between accumulation and consumption. Since the process of construction and the completion of construction greatly affect these two kinds of equilibrium, if agricultural construction and light industrial construction are properly planned, then these two kinds of equilibrium can be established and a proper proportional relationship between accumulation and consumption will be promoted. Conversely, inappropriate planning will spoil the establishment of these two kinds of equilibrium and therefore affect the proper balance in the proportional relationship between accumulation and consumption. Fifth, heavy industry can supply increasingly more means of production to agriculture and light industry. This is another aspect of a proper proportional relationship between accumulation and consumption. If the allocation of investment between agriculture, light industry and heavy industry is appropriate and the investment in heavy industry can fully meet this need, then this effect of construction will certainly be achievable. Conversely if investment is inappropriate, this effect will not be achieved. Of course, the five aspects above are intertwined. They are all indispensable criteria for judging whether the planning of agricultural, light industrial and heavy industrial construction is correct or not. Therefore, these five aspects must be comprehensively computed and balanced in order to correctly plan the proportion of investments in agriculture, light industry and heavy industry.

3. Improving the Effectiveness of Capital Construction

Improving the effectiveness of capital construction plays an important role in promoting and insuring a proper proportional relationship between accumulation and consumption. High effectiveness in construction means that the speed of construction is high, the construction cycle is short, investment is economical, the completed projects are handed over and put into operation on or before schedule, and the role of capital construction is brought into play according to the requirements of the design. These will enable the originally planned proper proportion between accumulation and consumption to be successfully attained. These will also enable the planned accumulation funds to be used economically so that good conditions are created for the planning of next year's accumulation funds and proportion between accumulation and consumption. In particular when projects are completed and put into production on or before schedule, capital construction suddenly changes from a process of consumption into a productive process. Social products are then supplied to society as anticipated and a reliable material foundation will be created for a proper proportion between accumulation and consumption in the coming year.

The effectiveness of our construction has been declining for a long time. This is one important cause for the disproportion in the relationship between accumulation and consumption. This drop in the effectiveness is manifested by the following. First, the investment effectiveness index has been declining. That is, in the recent 10 years or more, the increase in national income brought about by each unit's capital construction investment has been less than that in the 1st 5-year plan period. It has been mentioned that the size of the national income determines the scale of accumulation and consumption. A drop in the increment to the national income, given the same amount of construction investment, will limit the scale of accumulation and consumption and aggravate the contradictions between accumulation and consumption. Second, the construction cycle has lengthened. During the 1st 5-year plan period the construction of a large or medium scale project generally took 2 or 3 years. Now it takes 4 or 5 years or even longer. If the construction time is lengthened and projects cannot be completed on schedule, then the originally planned proper proportion between accumulation and consumption cannot be attained and contradictions will arise. Third, the project costs have risen. For instance, the project costs in the 4th 5-year plan period were 50 percent or even up to 100 percent higher than those in the 1st 5-year plan period. The increase in project costs and consequently the amount of investment has caused the scale of accumulation to exceed the originally planned scale. Consequently, accumulation has displaced consumption. Fourth, construction items have not been completed and put into production on schedule. Or, when they are completed they cannot bring the effects of investment into play because of various reasons, or they cannot supply useful products to society even though they are put into production. The result is that the supply of the means of production and the means of subsistence in society become increasingly inadequate, fiscal revenue increases by very little, losses increase, and the contradictions between accumulation and consumption continually worsen. Therefore, to promote and insure a proper proportional relationship between accumulation and consumption, the effectiveness of construction must be improved.

To improve the effectiveness of construction, work in many areas must be done well. Examples are as follows. The principle of concentrating efforts to achieve breakthroughs in or do a good job of certain tasks must be conscientiously implemented and efforts must not be scattered. Financial, material and human resources must really be made available and no gaps must be left. Policies concerning technology must suit our country's reality; we must not inappropriately desire large projects and foreign things and we must not blindly go in for small projects, primitive methods and mass movements. The planning of construction items must follow the principles of distribution of productive forces, and projects must not be started without the necessary materials and must not be situated far away from sources of materials and markets. Things must be done according to the procedures for capital construction and items not absolutely complying with the principles of construction must definitely not be hastily started. Capital construction management must be strengthened and the labor productivity in building construction and installation must be greatly raised with great efforts, and so on. These involve many diverse fields and special articles are needed to discuss these problems fully. What should be pointed out here is that the most important cause of the drop of effectiveness in construction in the past was the violation of objective economic laws. The determination of the scale of construction simply proceeded from subjective will and objective feasibilities were disregarded. The determination of construction items one-sidedly proceeded from necessity and the necessary conditions for construction were disregarded. Therefore, to improve the effectiveness of construction, it is most essential to respect objective laws and do things according to the requirements of objective laws. I think special attention should be paid to two questions. First, the determination of the scale of construction must observe the objectively required proportional relationships. In particular, it must satisfy the requirement that a proper proportional relationship exists between accumulation and consumption. Then capital construction can be based on the foundation of available financial, material and human resources. Otherwise, gaps will appear at every level and in every item, every item will suffer from a lack of resources and work must stop while people wait for materials. As a result, even if capital construction management is excellent and the efficiency of work implementation is very high, no progress can be made and the effectiveness of construction will inevitably decrease. Second, the location and distribution must be rational. We must absolutely not start items in places where resources are not available, where the geological conditions and resources are not clearly known, where the supply of materials and raw materials and sources of energy cannot be guaranteed and where the items will compete with already existing enterprises for materials, raw materials and sources of energy. We must not start those items which will be redundant, produce high priced but inferior products and waste manpower and money. Otherwise, even if the availability of financial, material and human resources is guaranteed, the speed of construction is high and construction is completed on schedule, investment will still not yield good effects.

CSO: 4006

OFFICIALS COMMENT ON DECISIONMAKING POWER OF ENTERPRISES

Beijing GONGREN RIBAO in Chinese 11 Apr 80 p 1

[Report by Central People's Broadcasting Station and staff reporter: "The Extending of Autonomy to Enterprises at Selected Points for Experiment Is Correct, and the Results of the Measure Are Good"]

[Text] At the national conference on industrial and communication work to increase production and practise economy, increase revenues, and cut down expenditures, responsible persons of the State Economic Commission, in discussing the extension of autonomy to the enterprises for management and control, observed that we must insist on the extension of autonomy to enterprises at selected points as an experiment, but we must likewise insist on assuring that the state will increase its revenues. On the basis of handling existing enterprise autonomy well, various localities and departments may take into consideration their respective conditions and take orderly steps to relevantly expand a little the area for such selected points. Apart from the processing industries, there also is a need to handle well the expansion of areas for such selected points in order to extend autonomy to the management of mines; the various localities may also select individual backward enterprises for experiment, in order to push forward the rectification of such enterprises.

At present, there are altogether 3,358 enterprises serving as selected points for experiment in the expansion of enterprise autonomy in the country. These enterpirses make up 8 percent of the total industrial enterprises included in the national budget; their output value makes up about one-third of the nation's total industrial output value, and their profit is about 40 percent of the total.

As for the situation at these points selected for experiment, the results are quite good, as they have generally achieved an increase in production and revenue. According to incomplete statistics from 2,963 enterprises selected for experiment in 22 provinces, municipalities, and autonomous districts such as Shanghai, Sichuan, Jiangsu and Hubei, their total industrial output value increased 12.2 percent last year over the year before, their profit increased 20 percent, and the profit they turned into the state treasury increased 13.4 percent. The volume of all these increases also exceeded the level before they were selected for such experiment, as well as the level of enterprises in the area beyond these points. In general, they have all created additional income for the state, the enterprises, and the employees, with the state's gain even greater than that of the enterprises themselves. But among the enterprises selected for experiment according to locally formulated regulations, the plans of some proved to be too ambitious; thus, the output value and profit of these enterprises did increase, but the profit they turned into the state treasury decreased. There was also a small number of enterprises which did not put the relevant emphasis on making efforts to readjust the enterprises themselves and to improve their management; they made gains merely by setting aside a percentage of the profit for themselves.

Responsible persons of the State Economic Commission said: Last year's experiments indicate that the policy of extending autonomy to enterprises at selected points for experiment is correct, and its results are good. But there must be serious measures to deal with the problems that have appeared in the work at these experimental points. This year, we must further improve our work at these experimental points along the lines of the following four aspects of desirable effort:

1. We must handle well experimental points which are designed specifically to set aside a percentage of the earned profit for themselves according to the methods prescribed by relevant documents of the State Council.

2. We must comprehensively carry out the relevant documents of the State Council concerning reform of the management system, broaden the content of the experiment for selected points, and not only continue to handle well the experimental points designed to set aside a percentage of the earned profit for themselves, but also select a few enterprises for new experiment in order to explore new experiences with respect to planning, materials, foreign trade, labor-capital relationships, etc.

3. We must combine our work in extending exterprise autonomy at selected points for experiment with our work on industrial reorganization. The various localities and departments, in conjunction with the industrial readjustment, must formulate industrial reorganization plans for their own localities and their own trades; the current specialized companies must be gradually transformed into companies of the nature of an enterprise. In the exetnsion of enterprise autonomy, gradual steps must be taken to change from carrying out such experiments at individual factories and mines to carrying them out in whole trades on the basis of such enterprise-like companies or specialized bureaus; this would facilitate overall planning, arrangements for technical renovation for whole trades, and promotion of the development of coordination between specialized enterprises. At present, efforts should be made to use big and medium cities as centers and to establish more local companies and promote "chain-like" coordination between specialized companies in agriculture, industry, and commerce.

4. We must further strengthen leadership over our work at the experimental points. We must combine work at the experimental points with rectification of the enterprises.

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CSO: 4006

ECONOMIC PLANNING

BEIJING ECONOMISTS TALK ON ECONOMIC RESULTS

HK191315 Beijing GUANGMING RIBAO in Chinese 9 May 80 p 1

[Report: "There Are Many Ways To Improve Economic Results--The GUANGMING RIBAO Editorial Department Invites a Number of Comrades From Beijing's Economic Circles To Attend its Forum"]

[Text] Leading comrades of the central authorities recently repeatedly pointed out that it is imperative to make comparisons among the economic results of all work to pick and choose the best programs which are characterized by small investment and great results. This is a very important guiding principle. On 28 April, this paper's editorial department invoted a number of comrades from Beijing's economic circles to attend a forum on the economic results in socialist construction. The participating comrades unanimously held that the forum has put forward a very urgent and important question on economic construction which must be speedily settled.

During the forum, the participants analyzed the situation of the development of the national economy over the past 30 years and the economic results of capital construction, communications, transportation, industrial production, the modernization of agriculture and commercial work. They also had a preliminary exchange of views on some theoretical questions concerning economic results. They noted: China has scored great achievement in economic construction. Generally speaking, the rate of China's economic growth has been quite high--averaging 9.5 percent a year in total industrial and agricultural output between 1950 and 1978, with an annual increase of 13.5 percent for industry. However, the economic results we obtained were not so gratifying considering the past 30 years of consumption of manpower, material and financial resources. Our country is still very poor. China is inferior to some 100 countries in per capita income. Over the past 30 years, people throughout the country have lived frugally and worked hard. However, no proper economic results had been obtained in China. In some areas, it is still very difficult to maintain even a low standard of food, clothing, shelter and transportation. Compared with developed industrialized countries, the economic results in our country are very poor. For example, the total amount of energy consumption in our country is similar to that of Japan.

However, China's industrial output value only accounts for one-fourth of Japan's. What is particularly worth pondering is that quite a few targets we have attained still fall far short of the previous levels we had reached. For instance, on the average, the construction cycle for completing China's large and medium-sized projects set in the First Five-Year Plan lasted 6 years and the construction cycle for completing such projects set in the Fourth Five-Year Plan lasted 11 and a half years which meant a nearly 100 percent increase in the construction time. In 1979, every 100 yuan worth of industrial output value gave us 16.5 yuan worth of profit and tax revenue. However, compared with the 24.3 yuan worth of profit and tax revenue we received from every 100 yuan worth of industrial output value in 1966, the 1979 figures show that the income from such profit and tax revenue declined by one third. Due to the fact that we failed to pay enough attention to economic results in the past, a lot of material wealth was squandered for no purpose through the process of production and circulation. To truly achieve greater, faster, better and more economical results in building socialism, we must attach great importance to improving economic results.

During the forum, the participants analyzed the various causes for the poor economic results. The basic cause is that in carrying out economic construction, we have not successfully proceeded from reality and that in doing economic work, we have failed to pay enough attention to seeking truth from facts, taking such measures as are suitable to local conditions and handling affairs in accordance with the economic law. The following are some concrete illustrations: judging from the whole national economy, namely, from the macroeconomic view we can see that we did not pay attention to acting according to our capability, went in for grandiose projects, and were too fond of quick results; that we did not pay attention to bringing the economic superiority of various areas into fully play and avoiding doing what we are incapable of doing but tried to do all things at once; and that we did not pay attention to abiding by the laws of socialist large-scale production and commodity economy, were influence by the natural economy mentality of the small-scale peasant economy and established the self-sufficient "large-and-complete" and "small-and-complete" systems in all places.

Judging from our enterprise management, namely, from the microeconomic view, we can see that the following were very common phenomena: Only paying attention to output but showing no consideration for quality, variety and specifications; only paying attention to output value but taking no notice of profit and loss; and only paying attention to production but ignoring the needs of society. With regard to leadership work in management and economic work, we can see that the patriarchal behavior as shown by "leading cadres' decisions" has been relatively glaring. This behavior has enhanced the atmosphere of subjectivism in our work. Therefore, to improve economic results, we must regard correcting the ideological line of our economic work, proceeding from reality, seeking truth from facts and using the economic results as the main criterion for all economic work as our most important tasks.

Comrades who participated in the forum noted: Our country has a very large population and a poor foundation to start with. It is still very difficult for our country to raise construction funds and to have very high accumulations. Therefore, to promote our economic work, we must not just place great hopes on having additional investments; we must devote a lot of time and energy to improving economic results. Producing the same number and quality of products with a small labor force and a smaller drain on manpower means great economic results; producing the products with a bigger labor force and a bigger drain on manpower means small economic results. Obtaining these "great" or "small" economic results depend on many factors. There are many ways to find a program to obtain the greatest economic results at the cost of the smallest labor consumption under the fixed manpower and material and financial resources conditions. Judging from China's present circumstances, we can say that economizing on material and financial resources and obtaining the greatest economic results at the cost of the smallest material and labor consumption are of very important significance. Marx said: Practicing economy means developing productive forces. In improving economic results, we should speed up the development of the economy and increase our material wealth which is needed for improving the people's livelihood.

The participants noted: To improve economic results, we must devote a lot of time and energy to the policy decisions on formulating guiding principles for economic construction and to making proper arrangements for our productive forces. We must also reform the existing improper economic management systems and policies and raise the scientific, educational and economic management levels of the masses of cadres, staff and workers. The participating comrades also called for carrying out discussions on some theories, guidling principles and polices concerning economic results and spreading scientific knowledge concerning economic results.

The participating comrades delivered speeches on special topics. The following are the names of the speakers and the titles of their speeches: Zhan Wu, director fo the Agricultural Economics Institute of the Chinese Academy of Social Sciences: "Strive To Improve the Economic Results of the Modernization of Agriculture"; Dong Fureng, deputy director of the Institute of Economics [of the Chinese Academy of Social Sciences]: "Improving Economic Results Is an Important Question in Realizing the Modernization Program"; Jiang Yiwei, deputy director of the Industrial Economics Institute [of the Chinese Academy of Social Sciences]: "Paying Attention To Economic Results Is the Foundation of the Economic Life of Mankind"; He Jianzhang, deputy director of the Institute of Economics of the State Planning Commission: "How Are We To Improve Economic Results"; Wang Weigong, director of the Comprehensive Transport Economics Institute of the State Economic Commission: "It Is Imperative To Attach Importance to the Economic Results of Transportation Building"; Lin Senmu from the Capital Construction Economics Institute of the State Capital Construction Commission: "Increasing Returns on Investments in Capital Construction Is a Task of Top Priority"; and Fang Dianwu from the Institute of Economics of the Ministry of Commerce: "A Probe of Economic Results on the Basis of the Contrast Between Various Historical

Facts." This paper will publish excerpts of their speeches. We hope that the masses of theoretical and practical workers will carry out discussions on issues concerning the improvement in the economic results of socialist construction.

CSO: 4006

PRC ARTICLE ON LI FUCHUN'S CONTRIBUTIONS TO ECONOMIC PLANNING

HK301149 Beijing RENMIN RIBAO in Chinese 22 May 80 p 2

[Article by Gu Zhuoxin [7257 0587 2450], An Zhiwen [1344 1807 2429], Li Renjun [2621 0086 0193], Gu Ming [7357 2494] and Fang Weizhong [2075 4850 0022]: "Comrade Li Fuchun's Important Contributions to Economic Planning Work--Commemorating the 80th Anniversary of Comrade Li Fuchun's Birthday"]

[Text] Today is the 80th anniversary of Comrade Li Fuchun's birthday. We cherish a feeling of reverence for Comrade Li Fuchun and recall his everlasting merits in the motherland's socialist building won through his practice of leading and organizing economic planning work. On this day when the focus of the whole party's work has been shifted to socialist modernization, studying the examples set by Comrade Li Fuchun in this aspect is of important practical and immediate significance.

I

As early as the period of the war of resistance against Japan, Comrade Fuchun was director of the financial and economic department of the Central Committee. During China's war of liberation, he had been a secretary of the West Manchurian Subbureau of the CCP Central Committee, a deputy secretary of the northeast bureau, a deputy political commissar of the northeast military region and a vice chairman of the northeast people's government. With his outstanding leadership ability and work style of seeking truth from facts, Comrade Fuchun closely relied on the masses of cadres and people and more important contributions to organizing and developing industrial and agricultural production, guaranteeing military and civil supplies, supporting warfare, liberating all of northeast China, the restoration and building of the northeast industrial base after liberating northeast China and assisting in winning victories in the whole country's war of liberation.

After the whole country's liberation, Comrade Fuchun became a vice chairman of the financial and economic affairs committee of the government administration council of the central people's government and a minister of heavy industry of the central people's government and assisted Comrade Chen Yun in being in charge of the whole country's industrial and communications work. At the time when the whole party still lacked experience in planning work, he presided over the formulation of China's planning control figures for 1951 and 1952 and organized a draft resolution of the central authorities on the management of state-run factories. The planning control figures and the draft resolution played important roles in rehabilitating and transforming the national economy. During the first session of the first NPC held in 1954, Comrade Fuchun was appointed vice premier of the State Council and chairman of the State Planning Commission. During the first plenum of the Eighth CCP Central Committee held in 1956 and during the fifth plenum of the Eighth CCP Central Committee held in 1958, Comrade Fuchun was elected a Politburo member and secretary of the secretariat of the CCP Central Committee to assist comrades Enlai and Chen Yun in their work. He and comrades Xiannian and Yibo took charge of the national planning, financial and economic work. He worked day and night, was conscientious and earnest, worked hard without complaint, quietly immersed himself in hard work and threw all his energy and wisdom into his work. Comrade Fuchun was one of the founders of China's socialist economic construction and planning work.

China's first 5-year plan for developing the national economy was mainly formulated and put into operation by comrades Chen Yu and Fuchun under the leadership of the party Central Committee and Comrade Mao Zedong. At that time, investigations into resources were insufficient, statistical data very scarce and various economic components existed simultaneously. Under these circumstances, to successfully formulate plans, Comrade Fuchun always worked late into the night and sometimes lay awake all night to do a huge amount of painstaking and highly effective work, thus putting forward many important and useful opinions. In view of the facts that there were great potentials for rehabilitating and developing agriculture and light industry at that time and that the then heavy industry had a poor foundation to start with, Comrade Fuchun proposed that the first 5-year plan should put the stress on building heavy industry and maintain a proportional and even development of the national economy. He noted: Plans must be built on a reliable foundation and must keep something in reserve so as to guarantee their fulfillment or overfulfillment; all undertakings must be promoted in accordance with plans; and it is imperative to refrain from approving individual construction projects that disregard overall balance. He also noted that in improving people's livelihood, it is best to say little and act more. Practice has proven that these opinions of Comrade Fuchun are very true indeed. When the large-scale industrial construction just started in the winter of 1953, Comrade Fuchun personally led responsible persons and experts of departments concerned to investigate the construction conditions of key factories and mines in Xian, Lanzhou, Luoyang and other areas. No matter how poor the transport facilities existed in some areas, he insisted on going to such areas to achieve a personal understanding of the conditions there. During the daytime, he chose the sites for building factories. In evenings, he presided over discussion meetings and strived to select some relatively favorable plans, submitting them to the central authorities for approval. To embody the ideology of running all undertakings industriously and thriftily in the party's economic construction line, Comrade Mao Zedong listened to work reports made by the central authorities' 34 financial and economic departments in the winter of 1955. During the report meeting, Comrade Enlai proposed that all socialist construction undertakings must achieve greater, faster and better results. Comrade Fuchun made a few additional remarks, saying that all the undertakings must also achieve more economic results. Comrade Mao Zedong favored their opinions which were later developed into the party's general line for socialist construction.

It is true that China's first 5-year plan had shortcomings of this sort or that. However, generally speaking, the plan was a success and scored great achievements. During this period, socialist economic systems were established and a large number of large-scale and medium-sized key projects of industrial departments were completed and put into operation, thus laying preliminary foundations for China's socialist industrialization. As a result, the people's livelihood was distinctly improved. In his report at the Eight National Trade Union Congress held in December 1957, Comrade Fuchun epitomized the three characteristics of the development of the national economy during the First Five-Year Plan: 1) socialist revolution and socialist construction were promoted simultaneously on a reciprocal basis; 2) production, construction, economy and culture were developed proportionately, in a planned way and at a high speed by making relatively full use of and transforming the extremely poor foundations and conditions; 3) all work was carried out under the guidance of the principle of giving consideration to both construction and livelihood and through the integration of the strengthening of political and ideological education and the improvement of material life. He held that these characteristics fully displayed the superiority of the then recently established socialist system and conformed to the overall, long-term and immediate interests of the working people.

China's economic construction scored great achievements but also took many unexpected turns. At the end of the 1950's and during the beginning of the 1960's, China's national economy fell into a very difficult position due to our party's mistakes in guiding economic work such as setting high norms, giving arbitrary and impracticable directions and showing the tendency to effect the transition to communism prematurely, natural calamities and the Soviet Government's tearing up of contracts and withdrawal of experts. Although Comrade Fuchun did not fully consent to many impracticable economic viewpoints and measures put forward during the great leap forward, he implemented them in the planning work. Comrade Fuchun never glossed over his own faults in his work. He repeatedly made self-criticisms and voluntarily took the responsibility for his faults. During the forum of general office directors of all economically coordinated regions held in June 1959, Comrade Fuchun discussed the necessity of drawing lessons from 1958's great leap forward, saying: If we say that our iron and steel production suffered losses over the past year, I would say that this was caused by our failure to pay attention to the overall balance. We did pay attention to controlling the increase in the number of staff and workers in previous years. However, we did not pay enough attention to it in 1958. As a result, the total number of staff and workers increased by 20 million people in 1958. When drawing up plans, we did not allow for unforeseen circumstances but stretched the plans taut. There are now no limits of authority in approving capital construction procedures and above-norm projects. How can we carry out work under these circumstances? Plans should be flexible, but this does not mean that we may carry out work without plans. Declining to have plans means declining to have a government. To solve these problems, Comrade Fuchun proposed at a Beidaihe conference held in the summer of 1960 that the national economy should be readjusted, consolidated and improved. At the end of August 1960, the party group of the State Planning Commission talked to Comrade Enlai. After listening to the report, Comrade Enlai held that Comrade Fuchun's opinion was correct. The eight-character principle of "readjusting, consolidating, strengthening and improving" the national economy was generalized from this basis.

In the first half of 1962, in accordance with the emergency measures put forward by Comrade Chen Yu, the party Central Committee passed a series of important decisions to insure the fulfillment of the arduous task of comprehensively readjusting the national economy. The decisions included reducing the urban population by 20 million within 2 years, narrowing the scale of industrial production and construction and the scale of cultural, educational and public health undertakings, simplifying the administrative structure, strengthening the front line of agricultural production and insuring the supply of urgently needed commodities. Comrade Fuchun presided over many meetings of the party group of the State Planning Commission, implemented the central authorities' decisions, resolutely overcame the shortcomings and mistakes in the planning work and organized responsible comrades of various departments including industry and communications, finance and trade, political and judicial and labor departments to supervise and speed up the fulfillment of assigned tasks in 19 major cities including Beijing, Tianjin, Shanghai and Nanjing. Due to the whole party's implementation of the eight-character principle and various policies, regulations and measures and after making great efforts for 2 or 3 years, the whole country quickly tided over the most difficult period of the national economy. From 1964 to 1965, the whole country's production and construction were quickly rehabilitated and developed and a gratifying situation emerged. During the 10 years of upheaval, our country suffered a catastrophe. Comrade Fuchun waged an arduous struggle against Lin Biao, the gang of four and their followers who were counterrevolutionaries and brought calamity to the country and the people. To counter the criminal activities of disrupting production as carried out by Lin Biao, the gang of four and their followers, he pointed out that industrial and communications departments must not stop production to participate in the Great Cultural Revolution. He actively supported the drafting of the "15 articles" on industry and communications and submitted this document to the central authorities for approval. After reading the document, Comrade Enlai said in his written instructions on the document: This document is very good. It is not only suitable for economic departments but is also suitable for foreign affairs departments. However, Lin Biao, the gang of four and their followers quickly criticized this as a "reactionary document." The most serious thing was that Lina Biao, the gang of four and their followers attacked and described the correct action taken by several old marshals and vice premiers as the "February countercurrent," smeared this incident as the "greatest antiparty incident" and labeled Comrade Fuchun as the "manager of the sinister club" of this incident. Under these adverse circumstances, Comrade Fuchun consistently coolly defied them with frowning brows, remained faithful and unyielding and displayed a communist's indomitable spirit. At that time, although Comrade Fuchun was in a very difficult position and unable to participate in leadership work, he still shared the suffering and misery of the party and the state and cared for the future of the socialist cause. He always asked the State Planning Commission for material and data, inquired about the conditions of production and worried about the development of the national economy. On 9 January 1975 filled with worries and indignation, Comrade Fuchun departed from the revolutionary cause which he fought for all his life. This was a great loss of our party. Our country's socialist economic planning work lost an outstanding leader and we comrades engaged in planning work lost a good teacher and a bosom friend. Whenever we think of this, our distressful and regretful mood does not calm down for a long time.

II

In his long-term process of leading economic planning work, Comrade Fuchun diligently and attentively investigated and studied major issues concerning socialist economic planning and paid attention to assimilating successful experiences in planning work and to drawing lessons from failures in planning work. He left behind many very precious views on the guiding ideology concerning the formulation of plans, on the methods of planning work and on the building of planning departments.

Comrade Fuchun consistently maintained that in drawing up plans, it is imperative to first find out about and ascertain the true situation and proceed from reality. He repeatedly stressed: In drawing up plans, we must have reliable statistical figures, data and findings. Only by conscientiously drawing up plans on this basis can we discover problems and have feasible and dependable plans. He noted: Those who do not conscientiously study objective possible conditions, set a great target first and then draw up a plan to attain this target are promoting a way of doing things which naturally cannot conform with reality. This truth-seeking spirit of Comrade Fuchun had been vividly displayed in many problems he handled. For example, in December 1963, he called for proceeding from China's practical situation, saying that in developing agriculture, the most important task is to find ways to put China's abundant rural labor forces to rational use and increase the per mu yield, and that in realizing the mechanization of agriculture, we must take such measures as are suitable to local conditions, promote the mechanization of agriculture in a planned way and avoid following the same pattern.

In drawingup plans, it is imperative to achieve an overall balance. Comrade Fuchun repeatedly pointed out that achieving an overall balance is the basic principle of all planning work. The more the work of the various departments of the national economy is minutely divided, the greater significance of achieving an overall balance will be shown and the heavier task of achieving an overall balance will be entrusted to us. Without an overall balance, there will be no proportional development in a planned way. In his speech at the eighth party congress held in September 1956, he noted: All aspects of the national economy are component parts of an organic whole. All these aspects affect and condition each other. If any become too protruding or too backward, an imbalance of proportional relations will emerge, thus hampering the growth of the national economy. To strengthen the work in achieving an overall balance, he put forward the following four points: 1) We must act in accordance with the party's general line and various guiding principles and policies and integrate key points with matters of overall importance. The egalitarian ideology of neglecting and weakening key points, the isolationist ideology of only paying attention to key points and disregarding other parts and the partial stand that puts undue stress on one aspect or one region are all detrimental to the development of the national economy. 2) We must pay attention to correctly mastering the law of developing the national economy proportionately and in a planned way. Proportional relations have their own definite law. However, proportions are not rigid formulas. We must have different proportions under different economic conditions. 3) We must proceed from a developing and positive point of view, continuously overcome new weak links and imbalances and enable the whole national economy to reach a new high tide step by step. 4) The central authorities' planning organs must be responsible for achieving a nationwide and comprehensive overall balance; planning organs of all regions and departments must conscientiously strengthen their work in achieving overall balance, strengthen their overall point of view and strive to organically integrate the regional and departmental overall balance with the national and comprehensive overall balance. Practice has proven that these viewpoints of Comrade Fuchun are still of practical and guiding significance to this day.

In drawing up plans, we must take into account both past experience and the situation that may possibly arise in the future, keep the general goal in sight and take the daily tasks in hand. In setting targets in our plans, we must allow for unforeseen circumstances. Comrade Fuchun attached great importance to long-term plans, noting: Being without long-term plans means shortsightedness and losing sight of the prospects of development. We must have a 20-year long-range tentative plan, a 10-year sketchy plan and a 5-year specific plan so as not to take one step and look around before taking another. He called for closely integrating long-term plans with annual ones. Long-term plans should program a relatively proper orientation and general picture of development for annual plans. In setting annual targets, we should give consideration to new conditions and problems that may emerge and retain regular reserve forces. In drawing up an annual plan, we must make a deeper concrete analysis of the actual situation of that very year, give consideration to dovetailing that very year's plan with the previous and the next annual plans and readjust annual targets set in long-term plans so as to guarantee the fulfillment or overfulfillment of the tasks fixed in long-term plans. Comrade Fuchun also stressed: When drawing up plans, particularly long-term ones, we must allow for unforeseen circumstances and retain reserve forces. In his report made in September 1953, Comrade Fuchun noted: "Plans without reserve forces are not capable of coping with changes in conditions and fortuitous incidents. In our economic life, there is always a possibility of our encountering changes in conditions and fortuitous incidents." Since our first 5-year plan allowed for unforseen circumstance, we basically fulfilled it in 4 years. As a result, the development of the different branches of the national economy was relatively coordinated. During the few years after 1958, excessively high targets were set in our plans, thus greatly harming our economic development. Comrade Fuchun had repeatedly called for learning a lesson from this error.

Comrade Fuchun paid great attention to strengthening planning departments professionally. For 10 years and more, he shouldered the responsibility of leadership in the State Planning Commission and made great efforts to raise the ideological and vocational levels of our planning personnel. From 1953 to 1954, Comrade Fuchun repeatedly called on our planning workers to strengthen their studies, saying: With the development of the socialist cause, higher quality plans are required. If we fail to become experts in a few years, we shall definitely fall behind and fail to keep pace with the objective needs of the development of the socialist cause. He called on all planning workers to make great efforts to study the socialist political economy, industrial and economic theories and the methods of a planned economy and statistics. He also called on them to study through practice, pay attention to accumulate experiences and continuously improve their ability to study and solve problems.

With regard to the building of the organs of the State Planning Commission, he called for greatly strengthening various comprehensive ones and realizing a clear division of labor among cadres in accordance with each one's speciality and suggested that they must not hold too many concurrent posts. Comrade Fuchun also stressed: The State Planning Commission must not only do well in drawing up plans but must also regularly inspect the implementation of all plans. Through this kind of inspection, we may discover problems in a timely manner, put forward measures to solve such problems and sum up experiences in such problems so as to improve our planning work. As we are currently going all out to promote the four modernizations, strengthening the work of planning departments and raising the level of our planning personnel are very important tasks. These opinions of Comrade Fuchun should still be regarded as the orientation which we should strive to adhere to.

III

When we recall Comrade Fuchun's great contributions to our country's economic planning work, we must also mention the deeds of Comrade Fuchun which embodied our party's fine tradition and work style.

The first thing that is engraved on the minds of workers in economic planning and praised by the people is Comrade Fuchun's democratic work style of being good at following the mass line and pooling the wisdom of the masses. In the course of drawing up plans, Comrade Fuchun paid great attention to attentively listening to the views of all parties. With regard to some major issues, he always discussed them with the regions and departments concerned and never made hasty personal decisions. He encouraged planning departments to be determined to cultivate an atmosphere of studying and probing into problems and bring out into the open the different views on guiding lines, principles, policies and major measures. With regard to differing views that emerge during discussions, we must not immediately retort and reject them. If both sides at a discussion meeting are hotheaded, this meeting may be adjourned for a few days and may then be resumed after the participants have become sober-minded and coolheaded so as to reach unanimity of views on issues concerned. This way of doing things is beneficial to our work. With regard to the method of planning work, Comrade Fuchun called for the three-in-one combination of leaders, experts and the masses. He noted: Since all are asked to participate in drawing up plans, there will be differing views which will create differing planning programs. The State Planning Commission should refine the conditions, demands and differing planning programs as reflected by all people, make deep comparisons among them, deeply analyze them, insure overall balance and draw its own conclusions in accordance with the demands of the party's line, guiding principles and policies. The State Planning Commission should then submit several differing planning programs including one of its own to the central authorities which have the final say and will decide on one. These views on planning work as put forward by Comrade Fuchun embodied the party's mass line.

In exercising leadership over economic planning work, Comrade Fuchun paid great attention to going deep into reality and making thorough investigations and studies, showed concern for the difficulties of the masses and solved all problems on the spot. During the 3-year period of economic difficulty, he visited Henan's Yuanyang, Yanjin and Fengqiu to inspect the serious salinization of soil in these places. After seeing with a heavy heart that the fields there were a vast expanse of whiteness, he conscientiously discussed methods to bring the salinization under control with the local cadres and people. When he saw at the entrance to a park a newly established guesthouse which covered an area of 800 mu, he was extremely indignant, silently walked from one building to anotherand then said to leading comrades of the provincial CCP committee: The people of the salinization-stricken areas have so many material difficulties. Our comrades have not used financial and material resources to help the stricken areas. Instead, they have used them to build such a sumptuous and gorgeous guesthouse. What on earth do our comrades mean? Do they still have the well-being of the people at heart? In the autumn of 1964, although Comrade Fuchun was at the advanced age of 64, he and Comrade Yibo still led responsible comrades of departments and regions concerned and trudged over a long distance to inspect southwest China where transport facilities were poor. A decision was made on continuing to build the Panzhihua District's industrial base following this on-the-spot inspection. After the on-the-spot inspection tour, they reported to the central authorities, saying that it is imperative to conscientiously draw previous experiences and lessons in the interior construction work. This strong sense of responsibility to the party, the people and the socialist construction cause is worth studying and promoting well.

Another fine work style of Comrade Fuchun was that he was good at pondering problems, diligent in personally handling problems, strived for efficiency and paid attention to relations with neighbors. During the First Five-Year Plan, he always presided over discussion meetings on the documents concerning the designing of some important construction projects and conscientiously solved practical problems. He opposed the sluggard work style and irresponsible attitude as shown by some people who did not study major issues and only drew circles and did not declare where they stand. As a comprehensive branch of the national economy, the State Planning Commission has close business relations with all ministries and commissions of the State Council. Comrade Fuchun demanded that in making contacts with other ministries and departments, all comrades of the State Planning Commission must avoid troubling comrades of other ministries and departments, try as far as possible to visit other ministries on their own initiative when problems crop up and have more consultations with comrades of other ministries and departments. The State Planning Commission must not take upon itself the affairs that should be handled by other ministries and departments.

Comrade Fuchun had consistently taken the interests of the whole into account and displayed a very strong sense of organization and discipline for several dozen years. This way of doing things has been universally acclaimed within the party. He implemented all the resolutions adopted by the central authorities and always attributed the achievements in economic construction to the correct leadership of the party Central Committee and the great efforts made by the people. With regard to mistakes in economic planning work, he always assumed responsibility for them on his own accord and never shirked responsibility or shifted the blame onto his superiors, subordinates or others. He could listen to people's criticisms with an open mind. Out of consideration for the general interest, he even listened to extremely unfair criticisms with an open mind. He had a mind to open as a valley and was strict with himself. All the people greatly praised his moral character.

Comrade Fuchun treasured and cared for cadres. All those people who had worked under Comrade Puchun were deeply touched by his very strong sense of principle and his uprightness. In appointing cadres, he persisted in appointing people from all corners of the country regardless of their area of origin, persisted in appointing people according to their political integrity and ability, gave cadres a free hand in their work and allowed them to work on their own initiative. With regard to those comrades who were bold in taking the responsibility for work and achieved remarkable success such as comrades Jia Tuofu and Zhang Xi, vice ministers of the State Planning Commission who had taken care of the commission's routine matters, he always had full confidence in them, offered them his full support and actively gave full play to their initiative. With regard to his comrades, Comrade Fuchun treated them with absolute sincerity, taught and helped them with skill and patience, was strict with them and never accommodated himself to them. He dared to come out boldly at critical moments to protect cadres. He was amiable and easy to approach. He led a thrifty and simple life, was honest in performing his official duties and enjoyed high prestige. It was just because of Comrade Fuchun's lofty moral excellence that he was called by others an "honest and kindly venerable elder."

Following the smashing of the gang of four, there have been fundamental changes in the conditions of our party and state. Our great march to realize the four modernizations has begun under the leadership of the party Central Committee. This is the unfulfilled wish of many deceased proletarian revolutionaries of the older generation including Comrade Fuchun. Under the new historical conditions, particularly since the shift of the work focus of the whole party, the tasks of our economic planning departments are very arduous. At present, we must act in accordance with the spirit of the 3d and 5th plenums of the 11th CCP Central Committee, further promote the work in readjusting, restructuring, rectifying and improving the national economy and do well in drawing up long-term and annual plans to develop the national economy. At this time, we are thinking of Comrade Fuchun more. Although he can no longer lead us to fight, the precious spiritual wealth he left behind and his noble moral character and style will continuously impel us forward.

CSO: 4005

GENERAL ECONOMIC INFORMATION

'STATION RESPONSIBILITY SYSTEM' EXPERIMENT LAUDED

Beijing BEIJING RIBAO in Chinese 19 Apr 80 p 1

[Editorial by Staff Commentator: "A Major Step in Industrial Modernization"]

[Text] The experience of the Capital Steel Works in seriously carrying out the station responsibility system is very important. Industrial fronts in the whole municipality must learn from, and help spread, this experience of the Capital Steel Works in order to establish and strengthen the station responsibility system in a down-to-earth way in the next few months, make a serious effort to carry it out thoroughly, and thereby raise the industrial management level in Beijing a great stride higher.

To charge forward single-mindedly in the direction of the four modernizations is the political line of our party. Our comrades on the industrial fronts must make efforts for industrial modernization and the modernization of our agriculture, national defense, and science and technology. Industrial modernization is multiphasic in content: products must have advanced design; their quality must be fine; their appearance must be appealing; their adornment must be exquisite; in the international market they must compete with products of other countries, and in the domestic market they must meet the demands of the state and the people. Productive technology and equipment must be as good as, or almost as good as, those of the advanced level in the international context. Production management must be scientific, achieving high efficiency and good quality at low cost. There must be an advanced management system capable of gathering domestic and foreign technological and economic intelligence in time, equipped to flexibly and effectively develop sales work and services in productive technology in the domestic and international markets, and good at making use of various capital funds most effectively, etc. In these aspects, there are still great gaps when we compare the domestic and international advanced levels. But the most backward aspect today is management. Not a few foreign experts get the impression, after they have visited and studied some of our factories, that the plant facilities and equipment they saw are not bad, and this was something they did not originally expect, but that management was too backward; as long as such management can be greatly improved, then under existing conditions productivity can surely considerably increase or even multiply many times. After the smashing of the "gang of four," many enterprises in our municipality have done a great deal of work and achieved considerable progress in rectifying their operations and improving their management; however, a great distance still remains between their management and scientific management, and there still exists a great potential there for production increases and the practice of economy. There are also a few enterprises which have not taken any steps in this regard; they still encounter many problems even to this day. Their management is bad; they have more people than tasks; they have no one to shoulder responsibilities; their amount of waste is sensational; the quality of their products is low; there is no adjudication for incidents and disputes; their discipline is lax; and their plant areas are dirty and disorderly. All of these [problems] especially await urgent rectification. Various situations illustrate that improving management and gradually establishing a scientific management system is a major aspect of industrial modernization and also an urgent task at present.

The content of enterprise managemnet is very broad: its foundation is the station responsibility system, as this is the basic quality an enterprise must achieve. If an enterprise lacks a practical, feasible station responsibility system, all magnificent goals for its struggle and all fine management systems will be amiss or prove deficient when put into effect. Only after a station responsibility system is perfected will the various technical and economic targets be guaranteed at the first line; only thus can good order of production be maintained and the effects of an increase in production and the practice of economy be obtained. In this regard, the Capital Steel Works has provided us with a persuasive example. On the basis of their present equipment, they have improved their management through the establishment and perfection of a station responsibility system as their central work, thereby succeeding in effectively organizing the enthusiasm of the broad ranks of employees and workers; to this they have added technical renovation, achieving an advanced level by making use of existing equipment. Last year, the achievement of 16 of their targets won first prize in the country, and the achievement of another six targets reached the international level of advancement. In raising quality, in increasing the number of marketable products, in fulfilling production plans and contracted tasks, in reducing waste, and in submitting profits to the state treasury,etc., they have all achieved outstanding results. Their experience illustrates that improved management is capable of powerfully promoting the raising of production and technology levels; to improve management is likewise an effective way to tap productive potential on the basis of existing assets.

The basic experience of the Capital Steel Works in carrying out the station responsibility system is this; 1. This station responsibility system not only prescribes what is to be done but also how is it to be done and to what extent; with respect to the targets that the company struggles for in an attempt to catch up with or surpass the advanced levels at home and abroad, it also breaks them down and allocates them to the various production stations.
2. Not only are the workers subject to this station responsibility system, but the cadres too have their operational regulations to follow, so that everybody's responsibility is made clear. 3. There are clear standards for examination, a system of inspection, and a combined consideration of a reward and punishment system to insure the thorough execution of the station responsibility sysetm. The basic aspects and main contents of this experience on

the part of the Capital Steel Works are evidently suitable for use by the industrial fronts of our municipality; they have a general meaning. But when various trades proceed to apply it, they must make it a point to adapt it to their local conditions and start from their own situations and characteristics, formulating a station responsibility system in accordance with their own situations and characteristics. An attempt simply to plagiarize and pass it down, in the hope of spaaring one's own efforts, is definitely not going to work, this would be simply a gesture of trying to do what must be done. We must make a strenuous effort to do straightforward work, rely on the masses, conduct investigation and research, and thereby unite the experience of the Capital Steel Works with our own situations in taking one firm step after another forward to carry out the work; we must also perfect it through repeated practice. Only thus can we expect the station responsibility system to really take root, sprout, and yield fruit in our own units.

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CSO: 4006

GENERAL ECONOMIC INFORMATION

'BEIJING RIBAO' COMMENTS ON BUSINESS ETHICS

Beijing BEIJING RIBAO in Chinese 10 May 80 p 1

[Ideological commentary by Zhang Nan [1728 0589]: "Seek Profit for the People, Don't Extort Profit From Them"]

[Excerpts] The profits of industry and commerce and tax revenues are the chief sources of capital and budgetary income for the realization of the four modernizations of our country. Industry and commerce should strive to fulfill and overfulfill their plans for profits and for handing over profits to the state, in oder to ensure the balance of revenue and expenditure and the smooth progress of all construction work. We should all strive to "seek profit."

At present, the enthusiasm of all enterprises to make profit is very great. There are lots of methods to "seek profit." However, if we analyze things carefully, there are two completely different situations.

Most of the enterprises seriously work according to party policy. They strive to expand production and marketing opportunities, improve management and the quality of service, and raise production efficiency and quality. They increase the variety of goods, eliminate waste, and reduce production costs. They make profits by sound measures of increasing production and practicing economy.

Some prices of raw materials used by light industry factories have increased. However, they have considered that if they raised the prices of the production accordingly, they would add to the burden of the masses; if they do not increase the price, the profit would be reduced. Therefore, they make big efforts to reduce the production cost, and obtain the result of reducing the cost of the production and increasing the profit.

Since the increase of foodstuff prices, some restaurants have tried in every way to lighten the burden of the masses. They adopt the principle of small profit but quick turnover, try hard to cut down production cost in other aspects and cook more low-price dishes. Their price increases are not big and they overfulfill the profit plan.

Some of the foodstuff shops have strengthened their control of prices, and firmly adhere to the prescribed prices of vegetables and so on. They try hard to be fair in buying and selling and exact in measurement. As a result, they have achieved the profit plan and also received praise from the masses.

These units have increased the profit of the state, as well as taken care of the interest of the masses. We call this kind of profit-making through proper ways "seeking profit for the people."

However, a few units have been attacked by the poisonous germs of the bourgeois belief in profit first. They seek profit unscrupulously, without paying attention to the consequences.

Some industry and commerce enterprises and units pay no heed to the repeated announcements of the Central Committee and the State Council. They stir up an unhealthy trend of indiscriminate and covert forms of price hikes, which arouse the discontent of the masses.

Some of the enterprises use covert ways to disguise the increase of price of the commodities, or are not active in handling small commodities whose profit is not high but which are the daily necessities of the people. They even arbitrarily abandon such commodities to sell some high-profit commodities, which causes lots of inconvenience for the people.

To make money, some of the shops even record, broadcast and sell the tapes of decadent songs, and publish and sell bad and vulgar photographs. Some publishers and units print and distribute large numbers of bad books, even books with pornographic contents. They help the bourgeoisie to corrupt our youths and people with their rotten ideology.

These units forsake party policy for money, at the expense of damaging the interests of the people. We call all these unlawful profits made by crooked means extorting profit from people.

Both are making profits, so why should some of them seek profit for the people, while other extort profit from them?

It is because the former thoroughly comprehend the duty of a socialist enterprise and the fundamental aim of serving the people, therefore they integrate creating more profits with implementing party policy. However, the latter focus only on money, and forget the nature and aim of an enterprise.

It is because the former pay attention to correctly handling the relations between the state, the collective and the individual. However the latter pu the profit of small groups and individuals in the first place, they wholeheartedly pursue retaining profits and bonuses, and forget uprightness in the pursuit of profits.

It is because the former are not afraid of difficult and painstaking work. They reach the peak by rugged and rough ways. However, the latter are lazy and seek convenience for themselves; they slide from the plain to the swamp.

We hope that those who seek profit for the people will carry on and forge ahead, and that those who extort profit will wake up.

CSO: 4006

GENERAL ECONOMIC INFORMATION

BRIEFS

JU UD LEAGUE INDUSTRIAL OUTPUT--Ju Ud League scored achievements in industrial output in the first quarter of this year. The total industrial output value was 16.1 percent higher than that of the corresponding period in 1979 and the output of all the 25 major products such as raw coal, synthetic ammonia, sugar and so forth surpassed the quarterly production plans. [Hohhot Nei Monggol Regional Service in Mandarin 1100 GMT 16 Apr 80]

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BRIEFS

RURAL CREDIT COOPERATIVES--The rural credit cooperatives are mushrooming in China. At present China has had over 59,000 rural credit cooperatives and over 350,000 credit stations. Statistics show that as of the end of March this year, the Chinese rural population had had deposits averaging 12.2 yuan per capita. In January-March this year, China's rural credit cooperatives granted agricultural credits totaling 3.66 billion yuan, an increase by 1.05 billion yuan over the corresponding period last year. [OW151639 Beijing Domestic Service in Mandarin 1200 GMT 12 May 80]

CSO: 4006

CONSERVATION SEEN AS MEANS OF EASING ENERGY CRUNCH

Tianjin TIANJIN RIBAO in Chinese 1 Apr 80 p 3

[Article by Jiang Wuning [1203 2976 1337]]

[Text] Energy is one of the important fundamental elements in the development of the national economy and for assuring the people's well-being. Some compare it to the "blood" and "lifeline" of the national economy. This comparison has definite logic, because energy not only provides power for industrial and agricultural production but also is an important resource. Reasonable utilization and conservation of energy constitute an urgent task on the battlefront for the development of industry, communication and other areas, a key issue in the implementation of the revised policies of the national economy, and a strategic measure for the realization of the four modernizations.

The shortage of energy has become a major problem for the world during recent years. Since the 1973 Mideast war and the oil embargo to the West by the Mideast oil-producing nations, a worldwide oil crisis has arisen and is becoming progressively more serious. Today, the world's annual consumption of standard fuel amounts to 100 trillion tons, two-thirds of which comes from oil and natural gas. It has been forecast that for the world to maintain its present standard of economic development, oil production must increase by 10 percent annually, and that 20 or 30 years from now, there will be a danger of total oil depletion. Therefore, while nations today are paying attention to the study and development of existing and new sources of energy, they give much emphasis to the rational utilization and the conservation of energy.

Our country is relatively rich in energy resources, possessing great reserves of waterpower, coal, oil and natural gas. However, our energy per capita is lower than the worldwide average. Since liberation, our nation's development in energy has been rapid--total energy production in 1978 was 11 times greater than that of 1953. Yet there is not enough energy to meet the demands generated by industrial and agricultural developments and the daily needs of the people. In the past 10 years, rudimentary work for constructing powerplants and progress in geological surveys for oil reserves have been hindered by the disruption and destruction brought about by Lin Biao and the "gang of four." This situation has created a serious imbalance in ratio between the power industry and other industries. This is the main reason for our country's shortage of energy today. Aside from this, our country is lagging behind in technology and industrial skills, its energy efficiency is low, and for a period in the last it has concentrated on developing heavy and chemical industries which are high in energy consumption--all these factors have made the energy shortage all the more serious. For instance, in the 26 years between 1953 and 1978, our nation's energy consumption coefficient was 1.22. That is to say, each 1 percent increase of the gross national product has been accompanied by an increase of 1.22 percent in power consumption. However, the developed countries, by using advanced technology and continuously improved equipment, have developed industries which are low in energy consumption. Their consumption coefficient is about 0.8. The [illegible] significant difference! Furthermore, we are a populous nation where energy is poorly managed and there is much waste. All these things have made the contradictions between the supply and demand of energy all the more prominent.

In our country, Tienjin is one of the major energy-consuming cities. The development of production throughout the city has been much affected in the past several years by energy shortages--there have been temporary halts of production in scores, even hundreds, of factories because of an inadequate power supply. This year, an 8-percent increase in total output of our city's industrial production has been projected over last year's figure, but the supply of fuel oil is 30 percent power than the previous year, there is a 12.6-percent decrease in the amount of processed oil; the availability of coal is lower; and the supply of electricity is still tight. According to an estimate of the department concerned, there will not be a rapid increase in the energy supply in our country before 1985, the contradictions between the supply and demand of coal, oil and electricity will become even greater, and the energy shortage will extend throughout the 1980's. Under these conditions, energy conservation has become a major task that must be earnestly and conscienciously pursued in the process of realizing the four modernizations.

In our city there is currently a great shortage of energy on the one hand and serious waste on the other. Lack of concern for the problem of energy, weak management, inefficiency in industrial construction, and lagging technology and industrial skills are the main causes for our city's low energy efficiency. According to comparative studies of other cities with advanced standards, both at home and abroad, energy efficiency in the United States and Japan scores above 50 percent and in the Western European countries above 40 percent, while the highest rate our city has achieved is a mere 28 percent. If we could raise our city's energy efficiency by 10 percent, 1 billion tons of standard coal would be saved annually. Our city's consumption of energy for generating electricity, making steel, and manufacturing synthetic ammonia is 22 percent, 74 percent and 200 percent higher, respectively, than that of the more advanced countries. For every 10,000 yuan of output value, our city's energy consumption is 55 percent greater than that of Shanghai and the electricity used per 10,000 yuan of output value is 30 percent greater than that of Shanghai. Among the city's major products, 50 percent have a higher energy consumption index than the national norm. It is regrettable, indeed, that the city burns several hundred thousand tons of fuel oil each year. With regard to energy, our city's organization is not sound and the system is imperfect. Eighty percent of our industries maintain no controls, keep no records, and conduct no checks on the amount of coal and oil consumed.

Our city has been slow in promoting new technology and new industrial skills for energy conservation; a good portion of the industrial boilers are antiquated, with heat efficiency of only 50 to 60 percent while that of the developed countries is as high as 80 to 90 percent. The combustible residue contained in our city's coal ash amounts to 20 to 30 percent in general; in some industries, the figure may reach 40 to 50 percent--which is way above the standard of 10 percent or lower set by the government. According to a preliminary investigation, the unutilized heat source in our city is equivalent to some 40 million tons of standard coal annually, which makes for a consumption coefficient of only one-quarter. In the area of solar energy and methane, our city has reached only the developmental stage; their utilization has not yet become popular. In general, our city has great potential for energy conservation.

How is the energy shortage to be solved? Increasing production and conservation of energy are fundamental policies for the establishment of socialism--the task of increasing energy production, hand in hand with conservation, must be firmly grasped. During the period of adjustment of the national economy, and for a long time thereafter, great efforts must be made to increase energy production. However, the development of energy requires much capital and a long period of time, while our research in new sources of energy is relatively new. There is much work to be done before new sources can be developed and utilized. At the same time, the national economy cannot be developed systematically and proportionately when the expansion of investment in energy has to be carried out at the expense of other areas. Therefore, energy conservation is the most important and reliable way of easing the energy shortage.

To make energy conservation a success, many tasks have to be carried out earnestly:

(1) People must be well informed of the present situation and must be given certain tasks to perform. The issue of energy must be laid before them. The level of consciousness concerning energy conservation must be continuously raised among the cadres and the mass of workers so that the work of political thought can be accomplished with resolution. Some cadres take the blindly optimistic attitude that "our country has plenty of energy resources. It is all right to use a little more." They have

not given much emphasis or attention to energy conservation. Others view energy conservation as a measure of expediency which has no place on the agenda. When the upper echelon pushes them a little, they move a little--but they do not consider energy conservation a major task to be carried out seriously. We must, through extensive education and publicity, and through in-depth and detailed work, bring the mass of workers, especially the leading cadres in each echelon, to recognize the close relationship between energy conservation and the realization of the four modernizations; and in turn, we must transform this recognition into conscious effort.

(2) Establish a sound organization for energy management and strengthen the leadership in carrying out the work of energy conservation. Each bureau, corporation and business must designate capable cadres and skilled personnel to work on conservation, gradually turning the entire city into an energy management network from top to bottom. The unit responsible for energy management in each echelon must shoulder the responsibility of managing, utilizing and distributing energy; it must set up long-term and short-term plans for energy conservation and decide the measures to be adopted; it must ensure that the implementation of these measures is systematic. Major measures, such as the remodeling of powerplants, the centralization of the heating supply, the gasification of coal for residential use, and the utilization of new sources of energy, etc, may involve many offices of many departments. To carry out these plans expeditiously, it is imperative to strengthen and promote close cooperation in the leadership.

(3) Strengthen energy management, particularly the basic work of management. For industries, standards of energy efficiency and heat balance should be established and the potential for energy conservation of these industries must be determined. Energy consumption quotas for industries and workshops must be reappraised according to their comprehensive, precise, up-to-date and practical needs. A rationing system must be adopted for the teams and groups in the factories. There must also be good data and evaluation systems. The responsibility for strengthening energy management does not lie with the consumers alone; it lies with the suppliers as well. Energy conservation should become an important part of the reorganization of industries which, together with sound programs for energy management, would make energy conservation systematic and routine.

(4) Vigorously extend new technology and new skills for, and raise the standards of, energy conservation. We must seek additional energy supplies through technological advances. Industrial equipment with high energy consumption but low efficiency must be remodeled and reconstructed, and plans for new construction already in the initial design stage must be developed to take full consideration of the need for energy conservation. All scientific and technological research work must be treated as major fields of study. In the meantime, studies and utilization of new energy sources must be expedited. The achievements brought about by effective

means of energy conservation should be summed up from both theoretical and technological points of view and further promoted, and all the organizations and departments that possess the necessary conditions for adopting new technology and industrial skills for energy conservation should be encouraged through proper measures.

(5) Economic energy policies must be studied and established. Practical experience shows that when energy conservation is tied directly to the profit of industries and the well-being of the staff and workers, it can yield distinct economic results. When a power circuit is overloaded and a power failure occurs, industrial losses follow. For this reason, some industries have already installed power-rationing devices which have led to the effective management, distribution and reduced consumption of energy. Last year, some 30,000 residential users of electricity switched from a flat payment system to a meter system, and 11 billion kw hours of electricity were saved as a result. Therefore, measures of encouragement for energy conservation should be continuously adopted according to the nation's regulations and standards. Furthermore, concrete actions must be taken to ensure that energy conservation projects take priority in the receipt of financial support and material supplies.

In short, energy production must be increased, and quickly, through energy conservation. We trust that as long as the leaders in the various echelons give emphasis to the problem of energy conservation, that as long as energy management is strengthened and the masses fully mobilized, and that as long as conservation measures are made practical and workable, the consumption of energy in our city will be reduced on a large scale.

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FUELS AND POWER

NUCLEAR RESEARCH AND NUCLEAR ENERGY IN CHINA

Duesseldorf ATOMWIRTSCHAFT-ATOMTECHNIK in German Apr 80 pp 197-198

[Article by R. Schulten]

> [Text] The future of China, perhaps the most promising developing country in the world with its population of nearly 1 billion, can still only be roughly estimated. In spite of the negatively felt aftereffects of the cultural revolution its people are looking hopefully towards the future, conscious of powerful unused resources. There are still great difficulties in extracting and using them, requiring many years of research and development work. In all a visitor from the West sees various perspectives that are slowly becoming clearer. The insights that the author could have of nuclear technology training, research and energy planning certainly destroy some illusions. However, they show a good possibility of cooperation in the future in the field of peaceful use of nuclear energy.

My Impressions and Observations During A Trip to China

China is a developing country. Viewing the cities and observing life, especially the ordinary people, it becomes clear that everything here is in a state of development. The population is poor and has to be satisfied with a low standard of living. Although the many palaces and beautiful parks point to the wealth of earlier centuries, today one can feel everywhere, especially because of the large population, that there is a lack of the most important thing--a matter of course for us--consumer goods. The houses are hardly able to contain the great number of people; the streets, even in the big cities, are often in bad condition. In the cities and on the country roads an amazing number of people get around by bicycle or on foot. Automobile traffic consists mostly of trucks that apparently transport tremendous amounts of construction material, coal and sometimes food. In personal contact with the people of China the foreigner finds great politeness, friendliness and helpfulness everywhere. Foreigners are even now such a rarity in the big cities that small groups of the curious form very quickly, staring at the foreigner, and try to understand every word he says. It is very rare to meet Chinese who speak a European language like English or French. Consequently it is very difficult to get along alone as a foreigner in a big city like Beijing. It is also impossible to make oneself understood with taxi drivers, so that it is advisable always to carry along the hotel address in Chinese.

In personal contacts with colleagues working in science and technology I was able to determine that all are very interested in getting knowledge from the West. There is great amazement about the FRG, which has built up one of the economically strongest societies out of a state of total destruction after the war. Many engineers and scientists wish and expect to do this just as we did and, with a powerful leap forward, to turn China into a country with a high standard of living and stability in a short time span of 20 or 30 years. When one meets the hardworking and intelligent engineers, scientists and workers and when one considers that this country has tremendous raw materials one would not at first doubt the possibility of a quick development. One wonders why it is not possible in this country, where there was a highly developed culture and many technical inventions hundreds or even thousands of years ago, to build a highly civilized country. The answer to this question is certainly very difficult. If we look at the present economic structure we find that more than 80 percent of all men and women are employed in agriculture. Even a stay of a few weeks shows clearly that there are few skilled technicians in this country. My theory, therefore, is that it is above all a lack of skilled labor that would make a quicker development of this country possible, just as it has also become a determining factor in the development of our present technology and economy in the Western countries because of their old tradition.

I was invited to China to give a course on high temperature reactors and to make contact with the scientists and engineers of reactor technology within the framework of visiting the institute. All the colleagues that I met there had a good education and a high level of knowledge. If Chinese technology today is in an outmoded and antiquated state, especially in nuclear technology (with the exception of the production of nuclear weapons), this can be attributed above all to the cultural revolution, which almost totally crippled scientific study at the universities and research institutes for more than 10 years. During this time teaching came to a standstill at universities and technical institutes; there were hardly any regular courses of study.

Professors and other highly qualified experts were forced to work for years in agriculture. A new scientific life has been possible only for 2 years. Everything is in a state of development. The laboratories and institutes are poorly equipped generally. They are in a state that we could compare to ours shortly after World War II. A few things remain from the cooperation with the Soviet Union in the years after the war. Almost all big instruments and the research reactors go back to this time and clearly show the influence of Russian technology.

I received my invitation from the University of Qinghua, where I held lectures to 100 to 120 students for 4 weeks at the institute of nuclear technology of this university which is about 50 km north of Beijing. Participation was uncommonly lively. Part of the students were from faraway southern provinces. The institute, which has about 1,000 coworkers, of whom about 400 are scientists, is conducting a series of large-scale experiments aimed at the development of the pebble-bed reactor. Heat transfer experiments are conducted there on a large scale, but the equipment is very simple. Furthermore, they are also working on problems of recycling for the development of layered particles and the production of fuel cells. The institute has use of a swimming pool reactor. The institute is also equipped with hot cells in which a few years ago recycling of fuel cells from a research reactor was conducted. During this time I was also invited to give a talk to a selected group of officials and scientists of the ministries and the Chinese Academy of Sciences. I also accepted an invitation to visit another nuclear research center south of Beijing, which is directly connected to the Chinese Academy of Sciences. This research center has a research reactor with heavy water, a cyclotron with low energy, a neutron source and relatively large isotope processing in hot cells. At the present they are busy there with the reconstruction of the heavy water reactor. The strong activation is apparently causing special problems. In the last 14 days of my stay I had the opportunity to visit other institutes in the vicinity of Shanghai. In one of these institutes I was able to observe experts for the pressured water reactor which are done there on a small scale. There they also had a critical experiment that is equipped with a relatively modern American computer. In other institutes I was able to observe various accelerators, the energy of which, however, does not exceed 10 MeV. Some of these instruments are used well in spite of being outmoded. I was impressed with some scattering experiments.

Naturally I was especially interested in the energy situation in China. I had the opportunity to talk with the minister of sciences and the acting Prime Minister Fang, a member of the Politburo, about energy problems. Furthermore, I was able to broaden my knowledge of these problems through numerous discussions with members of various ministries and energy companies. The main direction of the present energy policy in China intends to use coal as much as possible in the development of the Chinese economy. In some places, especially in the northern part of the country, there are large, cheap coal deposits that are excellent for these purposes. However, use of coal is hindered by transportation problems. The railroad network, although functioning without any problems, is not suitable because it is much too small; the rivers are also presently unsuitable as waterways for transportation, since they are not developed for these purposes. Nevertheless, it will certainly be possible in the next 20 years to use coal for all energy purposes to a greater degree. In the western part of China, especially in the province of Tibet, there are great possibilities for utilizing water power. Some constructions could be realized with a small capital investment. The problem of transportation for electricity, however, will be a hindrance for utilization, since practically all the consumers in the east are about 2,000 to 3,000 km away. Nuclear energy is viewed as a problem to be solved in the next century. Although coal reserves seem huge to us according to our concepts, they are about the same as ours per capita; so that in the long run China also has the problem of the use of nuclear energy. Among the discussion participants there was no unified opinion about the type of nuclear reactor to be chosen. A strong group, especially in the ministries, claims that the Pu-production reactors taken over from the Russians which are perfected for nuclear weapons should be further developed and used as a type of nuclear power plant. A small group is also in favor of using the light water reactor and the quick breeder in the next 10 to 20 years in places where coal transportation causes great difficulties. Finally there are also a number of energy technicians who are in favor of realizing the high temperature reactor and see in it various utilization possibilities for China in the future. I think that China will not decide on a definite type of nuclear technology for 3 to 5 years; the main criteria will lie in the applicability of nuclear plants in 20 to 30 years. There is at present sufficient uranium and thorium in China, so that the necessity of using high-conversion or breeding reactors is still in the future. There is great interest in other future development also, for instance, fusion and the use of accelerator plants for the production of synthetic reactor fuel.

In all these discussions and talks one could feel the strong desire to develop and use modern technology. The party apparatus propaganda also points out that it is of vital importance for the Chinese people to use large-scale technology. Proponents of the so-called "simple life" could study here under what conditions people have to live when they do not have use of modern technology. The goal for the next 20 years is to increase the present energy output of about 600 million tons of SKE [hard coal units] to several billion tons of SKE, which presently seems possible only by accelerated development of coal production. When one considers that there are now almost 1 billion people in China and that in the next century there will certainly be even more, it is evident on the one hand that there is a gigantic problem here; on the other hand one has to recognize that energy supply for as many people as this will have an important influence on the future of energy technology. It can also be expressed this way: The expected necessary development of this country in the next century will require one-fifth or one-fourth of all nuclear plants built. Since the rest of the countries in Asia will certainly work together with China to a degree, this nuclear market will mean an important portion of the development of the future of nuclear energy.

Many Chinese scientists that I met are interested in working together with the FRG, especially in the field of HTR. In the near future such cooperation will not have material results. But I am of the opinion that there are enough reasons to begin and to follow though on such cooperation. It seems especially important to me that we can make a valuable contribution to an important developing country.

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CSO: 4403

BRIEFS

GANSU PROVINCE COAL DEPOSIT--A large coal deposit covering some 112 square kilometers with 3.27 billion tons of reserves was discovered in Huating County, Gansu Province. The reserves of this coal deposit amount to more than 50 percent of the total coal reserves of the province. [Lanzhou Gansu Provincial Service in Mandarin 1125 GMT 8 Mar 80]

NEI MONGGOL COAL DEPOSIT--A coal deposit, the largest in China so far, was found in Jungar Banner, Nei Monggol. Proved reserves of the deposit is 14.6 billion tons and its prospective reserves is 36 billion tons. Characterized by great reserves, a thick coal bed and simple geological structure, this deposit is suitable for large-scale open mining. Transport facilities and water resources are favorable for establishing a large coal and power integrated base there. As of now 3 billion tons of reserves can be mined commercially. [Hohhot Nei Monggol Regional Service in Mandarin 1100 GMT 23 Feb 80]

HEILONGJIANG TRANSFORMER STATION--A 110,000-volt transformer station with computerized operation control was put into operation on 7 May at the Daqing oilfield in Heilongjiang Province. This is the first such automatically controlled transformer station at the oilfield. Its operation will ensure a reliable standard-voltage power supply to the facilities located in the southern part of the oilfield. [Harbin Heilongjiang Provincial Service in Mandarin 1100 GMT 7 May 80]

JILIN PROVINCE COAL PRODUCTION--The Liaoyuan mining administrative bureau in Jilin Province has overfulfilled its monthly production quotas since the beginning of this year. During the first 4 months of this year, the coal produced in excess of the target amounted to nearly 80,000 tons. [Changchun Jilin Provincial Service in Mandarin 1100 GMT 10 May 80]

LIAONING PROVINCE COAL PRODUCTION--In April Liaoning Province continued to increase its coal production, the tunneling footage and the strip mining work topping the peaks of corresponding periods of the past few years. The amount of tunneling footage surpassed the target by 1,459 meters, an increase of 22 percent, and the amount of strip work done on open-cut mines exceeded the target by 490,000 cubic meters, showing an increase of 7 percent. In addition, the raw coal production in the province surpassed the target by 3.8 percent. Among the 34 collieries, 33 fulfilled their production tasks. [Shenyang Liaoning Provincial Service in Mandarin 1100 GMT 6 May 80]

HYDROELECTRIC RESOURCES--Beijing, 19 May--According to the statistics released by the Power Industry Ministry, the newly verified total hydroelectric resources in China reached 680 million kilowatts, topping that of the 1950's by nearly 100 million kilowatts. Among the total hydroelectric resources, 370 million kilowatts can be exploited and utilized. If they are fully utilized, 1,900 billion kwh of electricity can be generated each year. At present, the gross capacity of China's hydroelectric generators is only 16.05 million kilowatts. [Beijing XINHUA Domestic Service in Chinese 0218 GMT 19 May 80]

NATIONAL HEAT BALANCE CLASS--Hangzhou, 14 May--The State Planning Commission, the State Economic Commission and the State Supplies Bureau recently ran a heat balance training class in Hangzhou. A total of more than 200 people, including leading cadres and engineering and technical personnel in charge of energy work from the country's 28 provinces, municipalities and autonomous regions and the State Council's 11 ministries, attended the class. A basic method in scientific energy management work, heat balance enables an enterprise to control its energy consumption level, effectively utilize thermal energy and find out the causes of waste of such energy. The country began to pay attention to such work in the past few years and formed an enterprise heat balance work group at the end of 1979. As of now, more than 100 enterprises in the country have carried out experimental heat balance activities. [Beijing XINHUA Domestic Service in Chinese 0128 GMT 14 May 80]

ELECTRIC POWER LINE--Shenyang, 21 May--China is stepping up construction of its first domestic-manufactured 500,000-watt electric power transmission line in Northeast China. This 378-km power transmission line starts from Yuanbaoshan in Juud League of Nei Monggol and ends in Liaoyang municipality of Liaoning by way of Jinzhou. [Beijing XINHUA Domestic Service in Chinese 0129 GMT 21 May 80]

CSO: 4006

MINERAL RESOURCES

VANADIUM, TITANIUM: ONE-TIME WASTE PRODUCTS NOW RECOVERED ON LARGE SCALE

Beijing XIANDAIHUA [MODERNIZATION] in Chinese Vol 2, No 4, 16 Apr 80
pp 17-18, 23

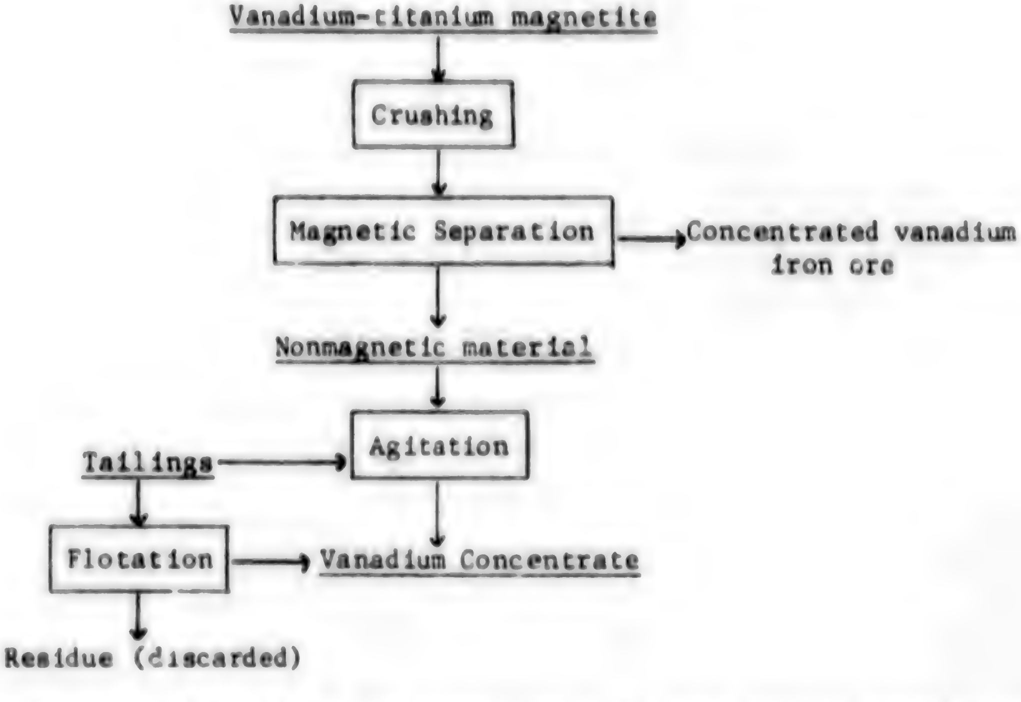
[Article: "How Vanadium and Titanium Are Extracted from Vanadium and Titanium Magnetite"]

[Excerpts] In nature, various ores contain vanadium and titanium. Because of the rich abundance and distribution of nonferrous metals which contain vanadium and titanium, the metallurgical industry regards them as a valuable resource. All continents on the globe have reserves of vanadium and titanium magnetite and China is blessed with rather large deposits, at the Panzhihua mines in Sichuan, for example.

Vanadium and titanium have broad applications in modern industry. Titanium is indispensable for alloys used in the manufacture of aircraft, ships and submarines. Titanium alloys constitute 30-50 percent of the weight of jet engines. In aircraft fuselages, titanium is used in the skin, the frame, and the undercarriage supports, etc. One "Boeing 747" uses 3,700 kilograms of titanium in its structure, or 9 percent of its total weight. In ships and submarines, titanium is used in the decks, hulls, intake and exhaust ports, mufflers, antennas and shafts. The rocket, guided missile, and space industries use titanium alloys for pressure containers, fuel storage tanks, rocket engine housings, rocket nozzles and sleeves, the outer shells for artificial satellites and airship gondolas. Chemical containers and reactor vessels require titanium and ocean magnesium extraction and sea water purification installations rely heavily on titanium. This is due to the many special characteristics of titanium: it has a specific gravity of 4.5, only 43 percent the weight of steel, high strength, especially when compared to other alloys under high temperatures; it resists corrosion and its resistance to corrosion by acids, bases and salts is better than stainless steel and its resistance to corrosion by salt water is second only to that of platinum.

In vanadium and titanium magnetite, both vanadium and titanium are found in an intergrowth with iron. In order to separate them, it is necessary to separately extract them and subject each to a different smelting process.

Today, the more advanced foreign nations use a process of magnetic separation, agitation, and flotation to separate the vanadium-bearing iron ore and the nonmagnetic titanium-bearing iron ore from the vanadium and titanium magnetite. The first stage is magnetic separation. Magnetic separation is simply ore dressing through magnetism. Here, the ore is first crushed and pulverized. Then a magnetic separator removes the high vanadium content magnetite (Fe_3O_4), leaving coarse pellets of nonmagnetic titanium iron ore. Eighty percent of the vanadium is distributed in the magnetite. The nonmagnetite coarse pellets of titanium iron ore then yield titanium through agitation, a separation process using the force of gravity. A commonly used agitation method is the cleaning [concentration] table method, which is much like the washing [panning?] method. The coarse pellets of titanium iron ore are placed on a cleaning table and the lighter, finer granules of titanium iron ore are flushed out by water and the heavier pellets drop through to a collection trough.



As the tailings resulting from the agitation still bear minute granules of titanium iron ore, the flotation method then recovers the minute titanium iron ore granules. Flotation is simply separation by buoyancy. In this method, oleic acid is commonly employed as an accelerant and methylisobutylcarbinol as a foaming agent. Different accelerants act as collecting agents for different ores. Here, the oleic acid collects the titanium iron ore. The foaming agent's function is to form foam, which permits the collecting agent to collect the mineral. The principle of flotation is like that of washing clothes. The difference is that in washing clothes the grease that goes into the suds is what we want to get rid of, while in the flotation process the ore that goes into the foam is precisely what we want [to retain].

China has unusually rich reserves of vanadium and titanium magnetite, but in the past neither the vanadium nor the titanium were extracted. When iron was smelted the vanadium and titanium granules were discarded. This was a pity, and not just because it polluted the environment. The Panzhihua mines used to dump vanadium granules into the Jinsha River where they were carried by the current to the mouth of the Changjiang. As the vanadium granules were toxic, fish in the Jinsha River were killed. Today, China separates the vanadium and titanium from the iron ore, turning what used to be pollutants into useful products to contribute to the four modernizations.

CSO: 4006

CAPITAL CONSTRUCTION

BRIEFS

LIAONING HOUSING--Liaoning Province plans to complete a total floor space of 4 million square meters of residential housing this year. As of early April, the total floor space of the residential housing under construction in urban areas of the province reached some 3.6 million square meters. [Shenyang Liaoning Provincial Service in Mandarin 1100 GMT 16 Apr 80]

CSO: 4006

FOREIGN TRADE

FOREIGN TRADE BRINGS BOOM TO SHENZHEN

Guangzhou NANFANG RIBAO in Chinese 22 Apr 80 p 1

[Report by Liu Xuejiang [0491 1331 1730] and Huang Xinhua [7806 2450 5478]: "Shenzhen Actively Promotes Foreign Trade"]

[Text] Since its founding a year ago, Shenzhen municipality has made great progress in developing economic relations with foreign countries and regions. By the end of last March, the Shenzhen municipal departments concerned had signed 285 compensatory trade agreements and foreign raw materials processing and assembly contracts with foreign trading partners; over 160 of these contracts are now being executed. In 1979, industrial enterprises in Shenzhen earned over HK$14 million, imported over 3,310 sets of equipment from abroad, and employed an additional 6,500 workers or more.

The processing industry in Shenzhen municipality has thrived on the steady flow of orders from abroad. The result is a booming local economy and increased per capita income. Our national economy has also benefited from this development. Processing enterprises which are under contract to process raw materials into finished goods for foreign businessmen have sprung up in over 80 percent of the suburban communes and production brigades. Many communes and production birgades have developed economies combining industry with agriculture. For example, four communes in Longkang District have opened over 20 small industries producing T-shirts, diamonds, electric batteries, recording tapes, gloves, toys, and leather products. Since their establishment, they have provided jobs for over 1,200 rural youths, including those who were on the waiting list for placement. Last year, their net profits from processing service exceeded HK$1.8 million. If compensation for equipment, service charges, and state subsidies are included, they grossed over 870,000 yuan in Renminbi that year. In 1979, four plants engaged in the production of artificial flowers, gloves, and leather products sprang up in Shatoujiao township. In addition to putting 153 persons on the regular payroll, they have provided local households or families with part-time processing jobs. Last year, this small township with a population of a little over 1,000 grossed 140,000 yuan in Renminbi from its processing service.

While developing industries that process raw materials for foreign firms, Shenzhen municipality has implemented a policy aimed at developing, consolidating, and improving the local economy by means of importing foreign equipment and technology in a way appropriate to local conditions. With the medium-size and small light and textile industries and compensatory trade as the mainstays of its economy, the municipality has actively developed rural freshwater fish and waterfowl industries. Thus far, it has signed 55 contracts calling for raising fish in reservoirs covering over 30,000 mu of land. Last March, fish fry and eggs of mollusks spawned in reservoirs covering 7,000 mu of land. The Songgang commune duck farm, with capital invested by Hong Kong businessmen, is expected to produce 500,000 Danish white ducks a year. It has imported the species of ducks from abroad and has begun to supply the market with meat ducks.

9574
CSO: 4006

NEED FOR LOCAL PACKAGING RESEARCH INSTITUTES STRESSED

Beijing GUANGMING RIBAO in Chinese 22 Apr 80 p 2

[Report by Ning Xian [1380 0341]: "Research on Export Packaging"]

[Text] A pressing problem, how to improve our export commodity packaging methods, has emerged as a result of the expansion of our country's foreign trade.

A case in point is that not long ago a statuette of an angel, painstakingly carved out of a jade by a 70-year-old artist, a precious work of art that took him 3 years to complete and that was worth thousands of yuan, became junk upon its arrival in a foreign country because it was poorly packaged and was broken.

Ours is a country known for its low level of industrial production. Many comrades who have long lived in isolation from the rest of the world and who are not well aware of international market practices are still too preoccupied with the promotion of production to pay any attention to packaging, insisting that what the consumer really needs is merchandise and not its package, which they describe as nonessential. In fact, this idea on commodity packaging is wrong. Commodity packaging is a subject that deserves careful research. For example, packaging and shipping charges can be greatly lowered if the sizes of containers used to ship export merchandise can be reasonalby reduced through improvements in their structural design; wise selection of a new type of packaging material and improved packaging methods can cut damage to fragile goods to a minimum; a slight embellishment of merchandise by means of packaging can increase its market value and make it more attractive to the consumer in the international market. All these things deserve research by skilled packers. With the development of social production and the rising consumption of goods has come a greater demand for better commodity packaging. It can be said that the commodity packaging enterprise has grown to become an independent industrial sector requiring comprehensive scientific knowledge and artistic skill.

Competition on the international market is acute. In order to open up new markets for their commodities, many countries have concentrated on improving commodity packaging skills in addition to improving their product quality and labor productivity, and to reducing their production costs. They have unhesitatingly spent huge amounts of money on commodity packaging research. At present, over 30 countries and regions of the world have established comprehensive or special packaging research units aimed at studying a variety of packaging materials now available on the market, and at improving packaging techniques. They have also conducted strategic research on the prospective development of the packaging specialty. Many countries have attached importance to packaging by encouraging their colleges to open training courses for packaging experts. In some developed industrial countries, contingents of expert packers have grown in strength and have turned the packaging industry into an independent industrial sector. For example, in the United States, the packaging industry can earn somewhere from $40 billion to $50 billion a year, accounting for 2 percent of the gross national product, ranking fifth in all sectors of the economy in terms of gross income.

Although the objective of production in the capitalist countries is at variance with ours, the importance they attach to the packaging of commodities is scientifically justified. Good commodity packaging has the advantage of being able to better protect the commodities, to provide safer storage and shipment, to stand a better chance of resisting environmental contamination, and to give the consumer a feeling of comfort. Export commodity packaging also reflects the level of civilization of the country of its origin. The elevation of our export commodity packaging standards can reflect our achievements and developments in the fields of production, science, technology, culture, and art. In other words, improvements in packaging are a matter of economic as well as political significance.

Although raw materials for the packaging industry abound in our country, we still have to spend a huge amount of foreign exchange currency on importing such materials from abroad each year simply because we don't have personnel specializing in this field. We will have to strengthen scientific research on commodity packaging and step up the production of packaging materials, containers, and crates which meet international standards, in order to save foreign exchange earnings, raise the quality of our export commodity packages, and increase our foreign exchange income.

At present, our country still lags far behind other countries in scientific research on packaging of export commodities. So far, there are neither packaging research institutes nor school programs devoted to training packers in our country. A small contingent of expert packers is widely scattered across the land. To insure success in scientific research work on packaging, we must take the following measures:

1. A task force must be organized to conduct an overall survey of scientific research programs at home and abroad that deal with packaging, and to work out a long-range plan and an annual program for developing a similar industry in our country. The plan should outline the objectives to be achieved.

2. We must concentrate our efforts on developing and building a Chinese national export commodity packaging research institute in the near future.

3. Our institutions of higher learning are advised to open packaging courses for students in order to step up the training of expert packers, and to send students abroad to study similar techniques.

4. Programs should be organized to exchange packaging techniques in China and other countries; efforts should be made to import advanced packaging techniques and equipment from abroad, and to study and renovate them. Only in this way can we catch up with and overtake the world's advanced countries in this field.

5. A network of scientific research units should be established throughout the country to deal with packaging. They should work together to begin research on foreign trade product or export commodity packaging in order to gradually change the backwardness of our packaging industry.

9574
CSO: 4006

HONG KONG-PRC TRADE SOARS IN FIRST QUARTER OF 1980

Hong Kong SOUTH CHINA MORNING POST in English 18 May 80 p 1

[Text]

Hongkong continues to reap the benefits of China's modernisation plans with exports and re-exports for the first three months of the year totalling over $966 million.

The biggest increase is in exports which went up by a staggering [illegible] per cent over the same period in 1979 to $305 million.

Substantial growth was also recorded in re-exports to China which recorded an increase of 300 per cent to a total of about $661 million.

As for Hongkong imports from China, the total for the three months also moved up by 34 per cent to $4,419 million.

China has been the principal source of imports in terms of foodstuffs to Hongkong because of the proximity and benefits in terms of cost and stable supply throughout the year.

However, the importance of China as a supplier of fuel oil is growing with petroleum and related products for the three-month period increasing by 137 per cent or $331 million over the corresponding period, totalling over $570 million.

Textile imports from China are also up by $161 million or 26 per cent.

As for domestic exports, much of these are in terms of electronic appliances, in particular sound equipment like radios and tape-recorders for domestic use and clocks and watches.

One of the principal items of re-exports from Hongkong is heavy industrial machinery and motor vehicles.

CSO: 4020

BRIEFS

IMPORTED TELEVISION RECEIVERS--Effective 15 April, the Shanghai alternating current station has considerably reduced the retail sale prices of imported black and white television sets. The average prices of 10 categories of television sets imported from Hungary, Czechoslovakia, Poland, and Romania have been lowered by 9.9 percent. For example, the per unit prices of Hungary's, Czechoslovakia's, and Romania's 12-inch television receivers are down from 480 yuan to 440 yuan, from 480 yuan to 420 yuan, and from 450 yuan to 400 yuan, respectively; the prices of Hungary's 20-inch and 24-inch television sets are down from 900 to 850 yuan and from 1,100 yuan to 1,000 yuan, respectively; and the prices of Czechoslovakia's and Poland's 24-inch television receivers are down from 1,100 yuan to 950 yuan. [Text] [Shanghai JIEFANG RIBAO in Chinese 19 Apr 80 p 2] 9574

TV REPAIR SERVICE--Some imported television receivers with designs different from ours may not be able to receive domestic television programs unless their "circuits" are adjusted. In order to serve the needs of customers owning such television receivers, the Universe Television Repair Shop located at the intersection of Changyang and Lanzhou Roads, has, through research, gained experience in "readjusting circuits" for foreign television sets. Its workers can now convert circuits for all categories of imported television receivers, including old and new, black-and-white, and color television sets with either transistors or electronic tubes. Usually, a customer can get his television set back the next day after sending it in for adjustment. He even can wait at the shop to see it fixed and take it back the same day if he so desires. Some foreign television sets with circuits more difficult to be adjuse may need 3 or 4 days to repair. [Text] [Shanghai JIEFANG RIBAO in Chinese 19 Apr 80 p 2] 9574

HAINAN SHIPPING--As of May, the Haikou Port Bureau will officially accept shipping consignments to ports in eastern China. In early 1979, the bureau conducted investigations and study and suggested to the Guangzhou Shipping Bureau that it formulate measures for transforming cargo shipping. Since the third quarter of 1979, experiments on cargoes shipping between Haikou and eastern China were conducted. By mid-April 1980, 13 sailings had been conducted, shipping 16,000 tons of cargo including sugar, ores and timber to Shanghai, Qingdao and Zhenjiang ports. [HK290802 Haikou Hainan Island Service in Mandarin 0330 GMT 22 Apr 80]

ZHEJIANG ORE LOADING PIER--Hangzhou, 7 May--Construction of the main projects for the Beican pier in Zhejiang was completed not long ago. An auxiliary project of the Shanghai Baoshan iron and steel complex, this iron ore transshipment pier consists of one 100,000-dun class berth, two 25,000-dun class berths, one 1-kilometer long landing state, one 1-kilometer long belt-conveyer corridor and an open storing ground of 500,000-dun capacity. Begun in January 1980, construction of these items were completed 1 month ahead of time. Complete sets of loading and unloading equipment imported from Japan is being shipped in installed. [Beijing Domestic Service in Chinese 0309 GMT 7 May 80 OW]

CSO: 4006

SHIP DEVELOPMENT DESCRIBED

Beijing CHUANBO GAILUN [INTRODUCTION TO SHIPS AND VESSELS] in Chinese 27 Mar 80 pp 1-2, 5-8, 15-24

[Selections from book edited by Wuhan Water Transport Engineering Institute; 214 pp]

[Excerpts] Develop a Large Shipbuilding Industry, Build Large Numbers of Ships

Our homeland is a great socialist nation. Our great leader and guide Chairman Mao pointed out: "Our China is one of the largest countries in the world, with an area about equal to that of all Europe. In this great territory of ours we have extensive fertile lands which can provide us with food and clothing; we have mountain ranges crossing the country which produce broad forests and conceal rich mineral resources; we have many rivers and lakes suitable for navigation and irrigation; we have an extremely long seacoast which makes it easy for us to carry on trade with peoples abroad. Since antiquity our Chinese ancestors have labored, rested and multiplied in this extensive land."

In our extensive homeland are great plateaus and cloud-piercing mountains, as well as rolling hills and level plains. The terrain is varied and magnificent. Our land is high in the west and low in the east and resembles three "steps." Our many mighty rivers take their origin in the mountains and plateaus of the west, cut through these steps and flow to the sea, connecting sea with land and east with west. The Yangtze, the Yellow River, the Heilongjiang River and the Pearl River, this country's four great rivers, all flow into the Pacific and are the arteries of our river navigation. In addition, the Liao, Hai, Huai, Qiantang and Min rivers are all suitable for navigation and irrigation. In our broad homeland, we have in addition to natural rivers a large number of manmade canals; the ancient Peking-Hangzhou Canal is a great achievement of this country's working people. The Peking-Hangzhou Canal starts in Peking and continues south to Hangzhou. It connects north and south, passing through Hebei, Shandong, Jiangsu and Zhejiang, and joins the Hai River, Yellow River, Huai River, Yangtze River and Qiantang River systems. With a total length of 1,700 kilometers, it is the earliest and longest manmade canal in our country and in the world. Now large-scale improvements are continuously being made on it, and in the future it will unquestionably become an important artery for navigation.

The country has more than 1,000 navigable rivers with a total navigable length of more than 100,000 kilometers, which are very important in communications between countryside and cities.

Our country's coastline embraces 10 provinces, municipalities and autonomous regions including Liaoning, Hebei, Tianjin, Shandong, Jiangsu, Shanghai, Zhejiang, Fujian, Guangdong and Guanxi, with a total length of more than 18,000 kilometers; if we include the coastlines of more than 5,000 islands along the coast, the length becomes much greater.

Our coast lies on the Bohai, Yellow Sea, Donghai [Eastern Sea] and Nanhai [South Sea]. These sea areas have rich nutrients brought by many rivers, and areas of mixing of warm and cold currents with suitable water temperatures, so that they are favorable to the growth of marine organisms; these areas are world-famous fishing grounds. The azure waters contain limitless marine resources; below the churning waves lie the mineral treasures of millions of years, waiting for us to develop and utilize them.

The oceans have attracted man since ancient times. In antiquity, towering mountain peaks, lush jungles and endless deserts were barriers to land communications, but in contrast, the extensive seas were a convenient route for communications abroad. Sea transport has a good many advantages. For example, boats may select fast, direct routes; they make use of natural water routes, which are cheap to establish and maintain; at the same time, ships can transport large loads, so that it is much cheaper to ship by water than by land. Coastal transport is responsible for transport of commodities between this country's harbors and its heartland, while deep-sea transport is an important means of stimulating foreign trade and is extremely important in advancing international commodity and cultural exchange and mutual assistance.

Expanding the shipbuilding industry and producing large numbers of ships is of great importance. This will produce various types of ships to build up river and marine transport fleets; it will supply large numbers of fishing boats for our extensive fishing grounds; and it will furnish all kinds of specialized ships for the development of oceanographic research, offshore oil drilling, surveying and maintaining navigation routes, building water conservancy projects and many other specialized technologies. A large ship is like a floating city, with an extremely strong hull construction, a powerful power plant, heavy-load electrical equipment, new type deck machinery, automated operating equipment, radio positioning and satellite guidance systems, artistic decoration, modern living facilities and the like, so that we may say that it is a combiend product of today's large industry and a synopsis of large-scale industry. Because the shipbuilding industry is extremely comprehensive and broad in scope, the entire process of shipbuilding requires coordination and close cooperation. In order to solve this country's past problems of too great a variety of ship models and machinery and lack of interchangeability of components, and in the interest of organizing future series production, assuring product quality, decreasing production cost and increasing labor productivity, we are gradually implmenting the "three standards (standard designs, fixed locations, standard series size) and three transformations (standardization, series production, multipurpose products)" in shipbuilding. This is an important measure aimed at accelerated development of this country's shipbuilding industry.

A Bright Future

Because of the corruption and incapability of reactionary rule in preliberation China, our country's shipbuilding was in a steadily declining state, almost entirely directed by imperialists and without its own shipbuilding industry. In the hundred years between the foreign encroachments in the mid 19th century and the overthrow of Chiang Kai-shek's rule in 1949, the country had only backward shipyard facilities, most of them concentrated in Shanghai and a few other coastal cities; it could only repair and build small quantities of river boats and small craft. This was the sad state of the shipbuilding industry in semifeudal, semicolonial old China.

After the entire country was liberated, and under the enlightened leadership of Chairman Mao and the Communist party, the mass of workers, cadres and technical personnel of the shipbuilding industry resolutely implmented the policy of independency and self-reliance, and by cooperative efforts on all fronts in less than 30 short years they built our small shipbuilding industry into a large one, brought it from the seacoast into the interior, developed it from repair and spare parts production to shipbuilding, made the changeover from single-ship to series production, achieved extremely rapid progress and gradually proceeded with modernization.

During the First Five-Year Plan, large-scale renovation and expension of existing old shipyards, and also expanded or created several dozen medium and small-size shipyards, set up a shipbuilding research base, created ship design organizations, and laid the initial foundations for further development of the shipbuilding industry.

The ships built during the First Five-Year Plan included such representative Yangtze River boats as: the Minzhong [3046 5883] a river passenger and cargo shop with a capacity of 1,000 passengers and a speed of 25 kilometers per hour; the Dazhong [2192 5883] a river cargo ship with a capacity of 1,600 tons and a speed of 23 kilometers per hour; series-produced 700-horsepower steam-powered tugs and 1,000 and 2,000-ton goods barges, ore barges, oil barges, coal barges and refrigerator barges of various designs; the passenger ships Beijing and Shanghai, capable of carrying 1,000 passengers, which came into use on the Songhua River in the northeast, and among oceangoing ships the 1,200 horsepower diesel tugboats, and the Renmin [0086 3046] No 10 ocean liner built in 1965. Starting in 1951 various cargo and passenger boats plying the lower reaches of the Yangtze River such as the Jiangxin [3068 2450], Jianghua [3068 5478], Jiangshun [3068 7311], Minzhu [3046 0031] and Jiangping [3068 1627] were overhauled, giving new youth to these decades-old boats.

During the First Five-Year Plan, this country's shipbuilding capacity increased more than 7 times.

In 1958 the shipbuilding industry entered the period of the Great Leap Forward, and in the brilliant glow of the general line of socialist construction the broad masses of employees and workers whipped up large-scale production and construction enthusiasm, and local medium and small size shipyards arose everywhere. The Great Leap Forward situation manifested itself in the construction of coastal cargo ships as follows: in 1958 the Dalian and Jaingnan [3068 0589] shipyards completed the Heping [0735 1627] No 25 and Heping No 28 steampowered coastal cargo ships with capacities of 3,000 tons, while in the same year the Hudong [3337 2639] shipyard produced the Heping No 59 diesel-powered coastal cargo boat with a capacity of 3,000 tons. The main and auxiliary engines and boilers of these ships were designed and built in this country. In addition, the Dalian shipyard also built a 4,500 ton coastal oil tanker and the Jiangnan shipyard built several railway ferries including the Shanghai, Jiangsu and Jinling [6855 7117]. In 1961 the Puniang [3184 3068] railway ferry, with electric propulsion, was also built, producing further progress in boat electrification in this country.

As for passenger boats, in 1961 the Hudong shipyard produced the Minzhu No 18 diesel-powered coastal passenger and cargo ship. Experimental production of the new hydrofoil boats was also carried on.

In addition, a wide variety of fishing boats was produced, along with dredges, floating cranes, floating pile drivers and other engineering boats, and in order to meet the needs of agricultural development large quantities of steel-mesh reinforced concrete agricultural boats were produced. During the Great Leap Forward period, shipbuilding workers dispelled superstition, freed their thought and showed a revolutionary spirit of bold thought and action, and in 1959 the Jiangnan shipyard created this country's first 10,000-ton oceangoing freighter, the Dongfeng [2639 7364]. This ship's main engine was an 8,800 horsepower low-speed diesel designed and produced in this country, and all the steel products, electrical equipment and instruments on the ship were also domestically produced. The building of the Dongfeng was an important step forward for our country's shipbuilding industry.

Following the Dongfeng, in order to meet the needs of the national economy's development, starting in the 1960's we further grasped the production of 10,000-ton and larger ships for various uses. In the first year of the 1970's, Shanghai's shipbuilders rang up the curtain on bigger and faster development in the shipbuilding industry, and in that year alone they produced six ships in the 10,000-ton class. They were: the 10,000-ton seagoing freighter Fenglei [7364 7191]; the 15,000 ton bulk cargo ship Anyuan [1344 3293]; the oceangoing passenger and cargo ship Changzheng [7022 1767]; the 10,000-ton oceangoing freighter Yueyang [1971 7122]; and two 10,000-ton rake-and-suction type dredges, the Jingsong [0513 2646] and Xianfeng [7145 1496]. Thereafter, the local Shanghai shipyards also produced a considerable quantity of 10,000-ton seagoing dry cargo ships and many Changzheng class passenger cargo ships, as well as two 15,000-ton bulk cargo ships. The Dalian Hongqi [4767 2475] shipyard designed and produced a 15,000-ton and a 24,000-ton oil tanker which were turned over in 1969 and 1974, and many other tankers of the same classes have been produced since. A 50,000-ton tanker was built in 1976, and currently a 100,000-ton tanker is to be designed. The Dalian Hongqi shipyard also designed and built four 10,000-ton large-hatchway seagoing freighters, including the Dali [2192 3810]; the Dali itself was turned over for operation in 1972. It has a V-shaped crane with a capacity of 120 tons, and it played a certain role in helping the Third World nations carry on railway construction.

As for Yangtze River boats, in 1971 the new passenger cargo ship Dongfanghong [2639 2455 4767] No 38 was produced, and a 4,000-horsepower pusher tug was experimentally produced. In 1975, the first model of a new passenger cargo ship for the lower Yangtze, the Dongfanghong No 11, was built. In recent years, 2,600-horsepower tugboats, 1,500-ton deck-type cargo barges and 3,000-ton oil barges have been produced in series; and sectionalized pushed barge trains are being studied and gradually popularized. In 1976, 1,000-, 500- and 300-ton sectional barges were studied and built, and old tugs and pusher tugs were rebuilt to form three-section pushed barge groups. These three-barge groups have made many test trips, and have been officially put into production. A pusher tug with 360° propeller rotation is nearing design completion.

During their large scale ship production, the country's shipyards have been unceasingly overhauling their production facilities, and are already making extensive use of new technologies and processes and further developing their shipbuilding capabilities.

The further development of the shipbuilding industry is a great victory of Chairman Mao's revolutionary line. Today, under the enlightened leadership of Chairman Hua and the Party Central Committee led by him, holding Chairman Mao's great banner high, inspired by the spirit of the 11th Party Congress, and profoundly unmasking and bitterly criticizing Lin Biao's and the "gang of four's" many crimes with regard to the shipbuilding industry and eliminating their pernicious influences, the shipbuilding industry is developing faster and better.

Freighters

Dry-cargo freighters. The Qingyang [1987 7122] is a dry cargo ship designed and built in this country alone and equipped with domestically-produced equipment. It is one of the 10,000-ton seagoing freighters produced by the Shanghai Jiangnan Shipyard during the Cultural Revolution. Its length is 161.9 meters, its beam 21.20 meters, its displacement 19,650 tons, and its cargo capacity 13,000 tons. The top speed is 17 knots, and the main engine is a 9,000 horsepower diesel. The Qingyang was designed in 1971 and handed over in 1972. In test cruises it showed excellent qualities and received a good evaluation. It has already been developed into a standard design.

Dry cargo ships are adaptable vessels which can take miscellaneous piece cargoes consisting of packages, crates and bundles. There are many different designs. In small rear-engine ships, in order to prevent waves from breaking over the deck, a forecastle and poop are provided, for example on the 3,000 ton coastal freighter series produced by the Shanghai Zhonghua [0022 5478] Shipyard. Some small central-engine ship have the bridge amidships, producing what is popularly called the "three island" design. In recent years, as the sizes of ships have increased, this three-island style has become less common, with only a deckhouse at the stern amidships, while at the two sides there are passageways for work by the crew, and only the forecastle is retained. When the forecastle is relatively long, the deck is only used for the anchor and tackle; the Dali is of this type. In freighters with rather high freeboard there is no forecastle.

A double bottom is very important in guaranteeing safety if a ship runs aground, so that seagoing passenger and cargo ships and dry cargo ships all have double bottoms according to regulations. In order to separate cargoes of different types and to avoid wetting, mixing and extrusion, as well as for convenience in tallying, single and multiple decks are used, depending on how deep the hold is. Generally it is best that the hold be no deeper than 5.5 meters, but also no shallower than 2.75 meters.

As a rule, the engine room of dry-cargo ships is generally amidships, but in recent years there has been a tendency to place it astern. The advantages of the rear engine room are:

1. It improves the shape of the hold, and slightly increases its capacity;

2. It is possible to increase the area of the hatches so as to increase the loading and unloading rate;

3. It is possible to decrease the shaft tunnel length. As regards the relative positions of the hold and the engine room, the Dongfeng has three holds forward and three aft, while the Dali and Qingyang have four holds forward and four aft.

The capacity of a dry cargo ship should be determined in terms of the quantities of cargo to be carried along the route. Generally the quantities of mixed piece cargo are much smaller than those of petroleum and ores, so the load-bearing ability of dry cargo ships has not increased must in recent years, while worldwide, seagoing dry cargo ships are still mostly in the 10,000 and 20,000 ton classes. The table gives some figures for certain seagoing dry cargo ships designed and built in this country.

Compared with passenger ships, dry cargo ships are somewhat slower; this country's dry cargo ships have speeds between 11 and 18 knots. Because loading and unloading time for dry cargo ships accounts for a relatively large proportion of total operating time, a decrease in the time spent in port is a fundamental was of decreasing shipping capacity. Accordingly, in recent years the countries which engage in shipping have energetically investigated technical measures for increasing loading and unloading capabilities. The dry cargo ship Dali, designed and produced in this country, uses several effective methods for decreasing loading time: first, the hatches are rather large (the hatchways of the second and third cargo holds measure 14.2 x 8 meters and 24 x 8 meters respectively); second, the hoisting capacity has been increased, cargo booms with capacities of 3/10 ton and 3/5 ton and two sets of winches; in addition there are also V-shaped 120-ton cranes usable for the second and third holds. These are an urgent necessity for aiding domestic development and providing sets of equipment to developing nations of the Third World.

Currently, V-shaped have lifting capacities up to 300 tons, while some ships place a 280 ton V-shaped crane at both sides of a cargo hatchway so that when used in combination they can hoist loads of up to 500 tons.

Bulk cargo ships. The 25,000-ton bulk cargo ship Zhengzhou [6774 1558] was designed and built in this country. Bulk cargo ships are used to transport certain cargoes which in the past had to be shipped in packages or crates, such as unrefined materials, coal, iron ore, powdered ores, lumber and the like. These types of ships can handle larger quantities of bulk cargoes than ordinary cargo ships, can unload them more rapidly, and can carry them more cheaply. Accordingly, since the Second World War, in order to speed up their plundering of foreign resources the capitalist countries have built large quantities of bulk cargo ships. In the last 10 years or so, total tonnage of bulk cargo ships worldwide increased by a factor of 10. The average tonnage of recently-built bulk cargo ships worldwide is 25,000 tons, while the maximum is 160,000 tons.

Although bulk cargo ships intended for carrying a single commodity have many advantages, there is inevitably a loss when they are empty. Accordingly, in the last decade all countries have attached importance to production of dual-purpose or triple-purpose bulk cargo ships; for example, since 1974 the Shanghai Jiangnan shipyard has produced a 60,000-ton coal and ore ship which is primarily used for this country's coastal shipping and in the near-sea areas; e.g. the Changle [7022 2867]. Multipurpose bulk cargo ships must have a special structural design to adapt to the different types of cargoes carried.

The Anyuan, built by the Zhonghua Shipyard, and the Tianjin, built by the Xingang [2450 3263] Shipyard, are primarily coal-hauling ships which can also carry such major bulk commodities as iron and wood. These are generally single-deck ships, because the cargo which they carry is not subject to extrusion. In addition, these ships generally have side tanks running the length of the ship for ballast when it is running empty.

For convenience in loading and unloading cargoes, the Changle has both the engine room and the pilot house at the stern, and the ship has five holds connected together as one unit.

Containers. Miscellaneous piece cargoes have always been loaded and unloaded as individual pieces or netted or palletized bundles, which wastes time and labor. The transport departments urgently need to solve this problem. In the last decade, containerized transport has been developed. Packing containers (often simply called "containers") are used as the shipping unit for miscellaneous cargoes, and everything is shipped from producer to consignee in the containers, which greatly simplifies loading and unloading and transport and increases transport effectiveness. This is also helpful for combined sea, land and air transport. In 1973 this country began to use the small-container method on the China-Japan trade route.

Container ships are special ships designed solely for handling containers; their holds are used to store the containers, which can also be stacked on deck. Design of these container ships has to take account only of the containers and not of their concents. Containers are generally made of metal, while some are made of glass-reinforced plastic. They differ somewhat in shape and dimensions, but international standardization organizations have published a table of container dimensions and weights, and the various models already produced in different countries are still in use. Typical sizes are 8 x 8 x 20 feet and 8 1/2 x 8 x 40 feet.

Container ships have the following advantages over ordinary dry cargo ships:

1. High loading and unloading efficiency. Accordingly in order to carry their cargoes and meet their schedules, container ships must have high horsepower and speed; current ships have speeds of up to 30 knots, so that their round-trip time is short and transport costs low.

2. Conducive to mechanization of transport; they also simplify tallying and save on packaging.

3. Decreased losses and mispackaging.

4. Containers are divided by use into ordianry dry goods containers, cold storage containers, ventilated containers, liquid containers and livestock containers, among others. Accordingly container ships are relatively adaptable to different kinds of cargoes.

In view of the above, the world's main shipping countries all consider containerization as the "principal improvement in shipping," and container ships are becoming a powerful addition to modern shipping. Our country's shipping departments also attack great importance to developing container ships, and are actively studying them and engaging in the necessary work. Naturally, in every case one divides into two, and container ships also have several problems:

1. Container shipping requires investment in large shore storage facilities; and the costs of manufacturing containers and container ships are rather high, so that the initial investment is rather large and the method cannot solve the problem of simplifying the loading and unloading of existing large-capacity dry cargo ships;

2. The stacking of containers on the deck decreases stability, and the rigid boxes are inconvenient.

3. The capacity of containers cannot always be fully used. In addition the containers have to be recovered and shipped, which increases the workload in transport and management.

In recent years, several other different methods for handling miscellaneous cargoes, along with the corresponding types of boats, have appeared abroad. One is the pallet ship, which can simplify loading and unloading work; this method mostly uses rebuilt dry cargo ships. Miscellaneous goods are shipped grouped on simple pallets. Loading and unloading work does not involve the use of gantry cranes or ship's cranes to lift the goods through hatchways; fork lifts do the unloading through broadside gangways. Another type is the barge ship. This is a seagoing mother ship which carries barges. Before setting out, cargo barges are floated into the mother ship, and after it reaches port they are removed from it and can be sent up rivers or along the coast. This method does not require expensive port facilities for the barges, and it can greatly decrease the port time for the mother ship and increase its utilization rate. But the investment is rather high.

Another method that first appeared in the 1960's is roll-on-roll-off ships. These are specialized transport ships in which truck trailers packed with the goods are used as the shipping unit; they may also carry loaded trucks or rail cars, or may even carry passengers. A truck tractor drives the trailer directly on board, and when it has reached the destination it is driven ashore, after which it can be transported directly to the consignee.

Currently in addition to powered roll-on-roll-off ships there are roll-on-roll-off barges which are used to transport large piece cargoes. These boats generally are connected into barge trains with tugs or pusher tugs.

Liquid cargo ships. Initially the transport of liquid cargoes was in barrels, and only later was there a switch to the use of tanks; but now specialized liquid cargo ships have been developed. Although liquid cargoes may include vegetable oils, wine, ammonia water and other liquid chemicals, the primary ones are petroleum and petroleum products.

Recently capitalist countries and especially the two superpowers, both contending and colluding, have been doing everything possible to plunder the petroleum resources of Third World nations in the Mideast, Latin America and North Africa. In the Mideast alone, nearly 100 million tons of oil flows annually to the imperialist and capitalist countries. Soviet revisionism daily moves closer to the Mideast and plunders it primarily by means of oil pipelines. The ocean routes from the Persian Gulf to Japan, England and the United States are 7,000, 12,000 and 15,000 nautical miles resepctively, and in order to meet the demands of intensified plunder these countries' oil tankers are becoming larger and larger. In 1962 the largest tonnage was 130,000 tons; in 1971, it was 370,000 tons; by 1973 it had reached 480,000 tons; with supertankers now under construction even reach 700,000 tons, while plans and designs for million-ton tankers are currently in progress.

Guided by Chairman Mao's great policy of "self-reliance and bitter struggle," since the investment in the Daqing oilfield our country's petroleum industry has grown by leaps and bounds. In 1968 the Dalian Hongqi shipyard began series production of seagoing 15,000-ton oil tankers, and in 1974 it built the Daqing No 61, the first seagoing 24,000-ton tanker. In addition, it has also built the Xihu [6007 3275], a 50,000-ton tanker, while the Jinling and other shipyards have produced large quantities of Yangtze River 3,000-ton oil barges which have made a contribution to this country's petroleum and water transport industries. Experience shows that large-tonnage tankers have the clear advantages of low shipping costs, lower investments, quicker return and higher labor productivity. In recent years our country has had an extremely pressing need for oil tankers, and study, design and construction of seagoing and river oil tankers are extremely urgent tasks of those involved in shipbuilding.

Oil tanker designs differ from those of dry cargo ships in several major respects:

1. Oil tankers are single-deck ships, because there is no problem with extrusion of the liquid cargo.

2. Oil tankers are generally single-bottomed. Double bottoms for safety and ballast are unnecessary.

3. Depending on the width of the ship, oil tankers have from 1 to 3 longitudinal partitions to correct negative effects on stability produced by the free oil surface.

4. Oil tankers have a small freeboard because the oil is pumped through hoses and the ships have no cargo hatches, being equipped only with cylindrical gas risers, in addition to which they have watertight hatch covers, so that there is no problem from waves striking the deck.

5. Tankers' engine rooms are in the stern because if the engine room were located between oil holds, there would have to be two oil pumps and pump cabins, and the shaft tunnel would have to pass through the rear oil hold, which would require that the tunnel be oil-tight and would thus increase the construction cost; and in particular, the sparks emitted from the engine room smokestack while en route could enter the gas pipe at the rear of the tanker and cause a fire.

6. Oil tankers frequently have a dry cargo hold in the bow. When the ship is fully loaded, the dry cargo hold is empty, which increases the buoyancy of the bow and prevents it from riding too low. When the ship is empty, the dry cargo hold is filled with cargo to increase ballasting of the bow and to prevent it from rising too high, thereby assuring that the ship will ride at a normal angle.

7. The tankers' decks are provided with a walkway connecting the forecastle, poop and central superstructure so as to allow passage between them and to

assure safety by preventing the crew from slipping in the oil or walking on the deck surface which is covered with various types of piping. Large oil tankers have an interior passageway just below deck.

8. Oil tankers lack crane booms and rigging because the petroleum is loaded and unloaded by pumps. Sometimes there are auxiliary booms above the dry cargo hold, or for hoisting oil hoses.

9. The hulls of oil tankers are almost always painted cold colors such as silver gray, green or light blue to decrease heating and evaporation of crude oil or petroleum products.

The pollution problem is one which must be given particular attention in the case of oil tankers. According to statistics, worldwide the amount of oil released into the oceans from the cleaning of tankers alone exceeds 3 million tons a year, which is seriously polluting the oceans and harming the economies of seacoast nations. In order to decrease this pollution, many nations have proposed different programs. Currently three types of measures are in common use:

1. Oil-containing ballast water from tankers is all drained into waste tanks in the port for treatment. This method is rather thorough, but it has the disadvantage of high cost.

2. When a tanker is empty on the high seas, the tanks are washed one after another, and the ballast water is treated and then pumped out of the tanks. A disadvantage is that this method cannot completely remove the pollutants, and that it must be done at sea.

3. A special ballast hold is provided inside the oil hold. This prevents seawater from affecting oil quality and decreases corrosion of the tanks resulting from alternating pumping of oil and water into them. Some tankers use a remnant oil recovery method to recover the oil washed from the hold.

Currently tankers include liquefied gas types. These carry natural gas and casing head gas which has been liquefied at low temperature or high pressure and them pumped into special tanks for transport.

Oil tankers have large dimensions, and they are relatively broad in shape with low speed. Seagoing oil tankers have speeds of 15-17 knots and coastal tankers generally 13.15 knots.

3. Pusher Tugs and Tugboats

Currently tugboats are used extensively in river transport. Self-propelled tugs tow non-powered cargo barges or barge trains. After a tug has towed the barge trains to port, it can be transferred at once to a different train and set out immediately, so that this method gives a high boat utilization rate and is economical.

Depending on the place of use, tugboats can be classified as oceangoing tugs, coastal tugs, river tugs and harbor tugs.

Oceangoing tugs generally have to contend with wind and waves, and they must have good wind resistance and seaworthiness. Accordingly they must have sufficient freeboard, and the superstructure must not be too extensive. In order to prevent waves from breaking over the bow, seagoing tugs generally have a long forecastle. For convenience, river tugs generally lack the forecastle and the superstructure is rather larger, but their maneuverability must be greater. Although there are certain differences in shape and layout resulting from the different conditions under which they sail, they have many basic characteristics in common:

1. The power developed by a tugboat's power plant is used only to a slight extent for overcoming the drag on the tug itself, whereas a large proportion is used to overcome the drag on the barges being towed; this is called the "towing power." In order to increase the towing power, tugs generally have extremely powerful power plants; in order to increase the efficiency of the propeller, it is generally desirable to have a relatively large propeller diameter, so that the draft at the stern is generally greater than that at the bow: i.e. the design has a built-in inclination toward the stern. In order to increase the towing power of the tugboat, some also have a cylindrical sleeve encircling the screw, which is popularly called a "water guide."

2. The tug itself does not carry passengers or cargo, and its dimensions are only those required for accomodation of the engine room, water and fuel tanks, crew quarters and storage; accordingly most tugs have a single deck from bow to stern and small dimensions.

3. Tugs must back and turn frequently, particularly harbor and river tugs. Because the water area is limited, they must be highly maneuverable, and accordingly the tugs should be short and the rudder large. The deck plan is curved and broadest amidships, which is most convenient for docking.

4. An important part of the tug's equipment is the towing hook, which generally is located about 3 percent of the total length of the tug behind the center of gravity and about 5 percent behind the midpoint; at a maximum it cannot be more than 12 percent behind the midpoint. This is because if the hook is too far back, maneuverability may be affected. In addition, the vertical location of the towing hook should not be too high, because this will affect stability.

5. When towing, if the barge train should run aground, or if the tug experiences a sudden pull on the towline, this pull can produce extreme listing, sometimes posing the danger of capsizing, and accordingly particular attention must be paid to the tug's stability.

6. Because the opportunities for collision are so great, the tug is generally also supplied with horizontal and vertical side bumpers.

The 420 horsepower Changjinag No 440 tug, built in 1972 by the Wuhan Water Transport Engineering Institute, has dimensions of 27.41 x 6.8 x 2.8 x 2.2 meters and a displacement of 178 tons. The free sailing speed is 19.9 km/hr and when towing 1,500 tons it is 13.5 km/hr.

Barges are divided into "unloading barges," used for loading and unloading goods from large ships, and "transport barges," used on regular routes. Transport barges are divided into commodity barges, oil barges, ore barges, coal barges, livestock barges, tank barges and the like. In addition, goods barges are classified in terms of the location in which the gogds are stored as "deck barges" and "hold barges". The advantage of deck barges is the convenience of loading and unloading.

Because of the need for large numbers of them, it is important that tugboats and ordinary barges be series produced and standardized.

Once they had been series produced and put into service, seagoing 400-horsepower tugboats, Yangtze River 400-horsepower tugboats and coastal 900-horsepower tugboats were standardized in 1975. Yangtze River 3,000-ton crude oil barges and 1,500-ton deck barges are currently in the standardization process.

Starting in the 1950's ordinary pushed barge trains gradually came into use in transport, and currently the pushing method is tending to replace the towing method. Experience shows that, for example, after the Hubei Provincial Shipping Office completaly implemented pushed barge transport, the average speed was increased by 32 percent over ordinary towed shipping, while the time in servcie was increased by 41.5 percent; the transport capacity per horsepower was doubled, transport costs were decreased and labor intensity was decreased.

Pusher tugs have two main characteristics in comparison with regular tugs: pusher tugs have a push frame on the bow, and in order to improve pilot visibility, the pilot's cabin is one or two levels higher. The Changjiang 3003, produced by the Jiangnan shipyard and the series of pusher tugs produced by the Qingshan [7230 1472] and Jinling shipyards all have this type of construction.

After ordinary pushed barge trains were developed, sectionalized barge trains were developed, and they are now being tested and popularized.

Sectionalized barge trains consist of a pusher tug and several barges. The barge trains may be fully sectionalized or semisectionalized. Fully sectionalized barge trains, the bow of the lead barge and the stern of the rearmost barge are curved, while the central sections have a rectangular profile. Semisectionalized barges are made up of the head and tail sections of sectionalized barge trains.

Sectionalized barge trains have several advantages over ordinary barge trains:

1. The overall linearity of the barge trains is better, which increased speed by 6-15 percent.

2. The barge sections have simpler lines and are easier to build. In addition, since the pilot house, rudder assembly, rescue equipment and crew cabins of ordinary barges are eliminated, production costs are decreased.

3. Sectionalized barges can be squat in shape, so that with the same dimensions the load capacity can be increased by 8-14 percent, while with the same load capacity the length can be decreased, thus decreasing metal consumption.

4. The sectionalized barges do not have crews, which saves manpower.

5. The sectionalized barges are easy to standardize and series produce.

6. Their piloting characteristics are better.

Main Parameters of Some Seagoing Dry Cargo Ships Designed and Built in This County.

我国自行设计制造的远洋干货船的主要参数 表 2-3

序号 No.	船名 Ship name / 项目 Item	Dongfeng 东风号	Chaoyang 朝阳号	Fenglei 风雷号	Qingyang 庆阳号
1	总长 L_z (米)	161.4	161.26	161.26	161.0
2	设计水线长 L_s (米)	151.96	153.19	152.20	152.96
3	垂线间长 $L_\perp$ (米)	147.00	147.00	147.16	148.00
4	型宽 B (米)	20.2	20.4	20.4	21.2
5	型深 H (至上甲板)(米)	12.4	12.4	12.4	12.5
	(至主甲板)(米)	9.5	9.5	9.5	9.6
6	设计吃水 T (米)	8.46	8.21	8.30	9.20
7	设计吃水下排水量 $\triangle$ (吨)	17,116	17,006	17,430	19,680
8	方型系数 δ	0.682	0.670	0.671	0.660
9	水线面系数 α	0.778	0.784	0.798	0.804
10	中剖面系数 β	0.986		0.984	0.976
11	棱形系数 φ	0.663	0.686	0.681	0.676
12	设计吃水时载重量(吨)	11,754	11,968	11,732	14,090
13	布置特点	前三后三 15	前三后二 16	前三后二 16	前四后一 17
14	船体钢料	合金钢 18	合金钢 18	低碳钢 19	上甲板合金钢 其余低碳钢 20

Key:

1. Total length L_z (meters)
2. Design waterline length L_s (meters)
3. Length between verticals $L_\perp$ (meters)
4. Beam B (meters)
5. Height H to upper deck (meters)
   Height H to main deck (meters)
6. Design draft T (meters)
7. Displacement at design draft $\triangle$ (tons)
8. Squareness coefficient δ
9. Waterline area ratio α
10. Cross sectional area coefficient β
11. Angularity coefficient φ
12. Cargo tonnage at design draft (tons)
13. Features of layout
14. Hull material
15. Three holds forward and three aft
16. Three holds forward and two aft
17. Four holds forward and one aft
18. Alloy steel
19. Low-carbon steel
20. Deck alloy steel; remainder low-carbon steel

Some disadvantages are: sectionalized barges are not easy to use singly, because the drag is very large; in a given barge train, only barge sections of the same dimensions can be used; and when loading goods, their distribution must be carefully monitored to assure that the sections will have a uniform draft, producing a good linear whole.

Although at present river conditions make it impossible for sectionalized pushed barge trains to completely replace other river transport methods, the recent trend of development is for the trains to become larger and more specialized, with some of them including 60 or more sections and with a total tonnage of about 30,000 tons.

In order to increase the productivity of pushed barge trains, the Yangtze Navigation Research Institute has devleoped an automatic coupler for 250 ton barge trains. Compared with traditional rope mooring, the new coupling device not only saves labor and improves labor conditions, but also requires only 5-6 percent of the time required for morring the barges with ropes. In addition, it can adapt to such complex conditions as longitudinal jolting, vertical tossing and transverse twisting. The automatic coupling simplifies the rope mooring method into two-point coupling, joining tug to barge and barge to barge. The tugboat has two coupling pins on the bow and the barge has two coupling locks on the stern with their centers 5.5 meters apart. When making up the train, the coupling pin guides are slipped into the locks, and the bolts fall place and lock automatically. When breaking up the train, all that is required is than one person lift the bolts, after which the tug can back out under its own power. The new coupling device has been tested on the upper and lower Yangtze, tried out in such difficult navigating areas and has been subjected to windblown waves of classes 5 and 6; by affording maneuverability, wind resistance and seaworthiness it has met all conditions for use in shipping on the Yangtze.

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PRC ECONOMIC JOURNAL DISCUSSES SOVIET SHIPPING EXPANSION

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[Article by Mao Hanying [3029 3352 5391]: "Shipping Expansion of the Soviet Union"]

[Text] Vying with another superpower for world supremacy, the Soviet Union has regarded the seizure of supremacy of the high seas as an important part of its global strategy. For this reason, since the 1960's it has furiously expanded its naval power while simultaneously vigorously developing shipping transport and building up an enormously huge merchant marine, thus becoming a superpower in world shipping. Shipping has not only earned the Soviet Union a large amount of foreign exchange every year (4 billion rubles were earned between 1971 to the first half of 1977) but also given it enormous "advantages" in global strategy and in the collection of military intelligence. It has become an important tool for the Soviet Union to pursue external infiltration and expansion and to seek world supremacy.

1. Shipping Development

In the early 1950's, Soviet shipping was undeveloped. In 1950, the gross tonnage of the Soviet Union's merchant marine was only 2.10 million tons, ranking 21st in the world. By 1960, it was still only 3.43 million tons, 2.6 percent of the world's gross shipping tonnage, ranking 12th in the world. At that time the Soviet Union depended mainly on chartering ships to transport its foreign trade goods. Beginning from the early 1960's, it purchased a large number of ships and much shipping equipment from abroad mainly to meet its outward expansion needs. Simultaneously, it greatly rebuilt and expanded its port facilities. In this way, Soviet shipping developed rapidly. Between 1967 and 1975, the gross tonnage of the Soviet Union's oceangoing fleet increased 5.2 times. This greatly exceeded the increase rate (1.9 times) of the entire world's oceangoing shipping for the same period. In particular, from 1967 to 1975, the Soviet Union each year added an average of 700 ships, with a gross tonnage of 1.2 million tons, to its oceangoing fleet. This speed of development has seldom been seen in the history of the development of world shipping. According to statistics from Lloyd's Register of Shipping of Britain, as of the end of November 1978, the Soviet Union had 7,991 ships, each of 100 tons or above, with a gross tonnage of 22.262 million tons (equivalent to 24.222 million deadweight tons), representing 5.5 percent of the gross tonnage of the entire world's shipping. This made the Soviet Union sixth in the world, following Liberia, Japan, Greece, Britain and Norway.

Compared with Western countries and Japan which have advanced shipping facilities, the composition of the mercantile fleet of the Soviet Union has the following four special features:

1. The proportion occupied by oil tankers is relatively small. The Soviet Union is more than self-sufficient in petroleum. Its tanker fleet principally carries a small volume of crude oil for export. In 1978, its tankers and ships carrying liquefied natural gas occupied only 21.4 percent of the gross tonnage of Soviet shipping, whereas tankers made up 44.5 percent of the gross tonnage of the world's entire mercantile fleet.

2. The proportion occupied by ordinary oceangoing freighters (mainly mixed cargo carriers) carrying high-priced goods is relatively large. In 1976, the Soviet mercantile fleet had 1,831 ships of this category, with a gross tonnage of 7.7 million tons, representing 37.3 percent of the gross tonnage of the entire Soviet mercantile fleet. (In the same year, ordinary freighters made up only 20 percent of the gross tonnage of the world's entire mercantile fleet.) The Soviet Union's ordinary freighters made up 10.5 percent of the gross tonnage of the entire world's ordinary freighters and accounted for 12 percent of the world freight carried, occupying first place on both counts.

3. The gross tonnage of icebreakers (0.213 million tons in 1978) was 54.8 percent of the world's entire tonnage. In addition, the Soviet Union has 3 nuclear-powered icebreakers. This is due to the great majority of Soviet ports being in high latitudes areas, frozen during the winter and also because of the strategic need to keep the shipping lanes in the Arctic Ocean open in the summer months.

4. Soviet ships are of relatively new construction. Of the Soviet Union's oceangoing fleet, three-fourths of the ships are beteen 10 and 15 years old, while ships less than 10 years old made up two-thirds of the entire merchant fleet.

Following the rapid expansion of the Soviet oceangoing fleet, in 1977 Soviet shipping carried 220 million tons of goods and the cargo turnover bolume was 417,300 million ton-nautical miles, showing an increase of 1.9 times and 4.9 times respectively compared with 1960. Of the entire freight turnover volume carried by various forms of transport in the Soviet Union, that carried by shipping increased from 7 percent in 1970 to 13.7 percent in 1977. In 1977, shipping carried 47.5 percent of the entire transport volume in Soviet foreign trade, ranking first among the various forms of transport.

II. Causes of Development and Principal Measures Taken

The Soviet Union took 15 years to rise from a nation of comparative backwardness in shipping to one which is in the forefront of the world's shipping nations. The principal reasons the Soviet Union attached so much importance to shipping development are that economically shipping can earn much foreign exchange for the country and its development serves to meet the country's military and strategic needs. Soviet Naval Commander Gorschkov has publicly declared: "Shipping constitutes an important part of a nation's power on the high seas"; "shipping transport, fisheries and research in oceanography form part of the naval power of the Soviet Union"; transport ships "provide important logistic support to the navy." For this reason, in organization the Soviet Union's merchant fleet is placed under the command and control of the naval headquarters. All its seamen must undergo military training, take part in military drills and be convertible into naval cadets at any time. Many naval commanders and cadets are directly assigned to the merchant fleet. At the same time, many merchant ships were designed as auxiliary vessels of the navy. For example, in recent years, a new type of so-called "roll-in-roll-out" freighters have appeared in the Soviet mercantile marine. They are provided with a long hatchway and shaped on the outside like a landing craft. These freighters are used for carrying tanks, artillery and missiles. The Soviet Union used this kind of vessel to carry heavy arms to Angola in 1976 and more recently to Vietnam.

According to Western sources, certain "commercial vessels" of the Soviet Union have electronic intelligence equipment. When these vessels enter or leave Western ports, they use such equipment to collect military intelligence and to carry on espionage. In addition, the Soviet Union places trained special agents in its shipping offices in Western Europe and the United States to collect military and economic intelligence, carry out liaison and exchange information with agents stationed in other Western countries.

Furthermore, the Soviet Union has made use of its merchant marine as a tool to carry on political activities in other countries. When undertaking aggression and expansion work in certain African nations of the Third World, the Soviet Union generally first sends in its merchant ships and fishing vessels to cover up their activities. Using the pretexts of navigation, fishing and scientific survey, it signs agreements with the nations concerned for the use of ports and bases and maintenance rights. In turn, "specialists" and "advisers" are sent in to help carry out economic and military projects. In the end, bases are obtained for use with its infiltration work.

To expand the shipping industry, Soviet authorities have continually increased investments in shipping. In the 10th Five-Year Plan period of 1976-1980, an increase of 26.9 percent over the Ninth Five-Year Plan period. In addition, the following concrete measures have been implemented:

1. Vigorous renovation of the management system. Shipping in the Soviet Union is placed under the control and unified leadership of the Ministry of Shipping. Before 1973, a three-level leadership system was in force according to which the Ministry of Shipping had a directorate general of transport under it which was responsible for managing the operations of the ships of the 16 basic-level shipping companies and supervising port administration work. Due to the overcentralization of the control power in the directorate general of transport, local shipping departments could not fully display their positivism and initiative. In early 1973, the Soviet Ministry of Shipping was reorganized on the guidelines of "correctly readjusting the centralization plan and appropriately bringing into fully play the initiative and autonomous rights of the companies." The organization structure in control of oceangoing shipping was reorganized into a three-level setup composed of the Ministry of Shipping, the joint shipping companies and the basic-level shipping companies. Following the principle of joining neighboring sea areas together, Soviet shipping was put under the control of three joint shipping companies--the Northwest Joint Shipping Company (in Leningrad), responsible for managing the six basic-level shipping companies along the coasts of the Baltic Sea, Barents Sea and White Sea; the Southern Joint Shipping Company (in Odessa), responsible for managing the six basic-level shipping companies along the coasts of the Black Sea and the Sea of Azov; and the Eastern Joint Shipping Company (in Vladivostok), responsible for managing the four basic-level shipping companies along the coast of the Pacific Ocean. Aside from controlling the basic-level shipping companies and supervising the ports and shipbuilding and repair yards, the three joint shipping companies mentioned above are charged with managing and controlling shipping lines, maritime schools and organs serving the fleets. With the reorganization of the shipping setup, organs such as the directorate general of transport, general bureau of shipping lines, bureau of technical control and ships repair and others were abolished. The joint shipping companies were placed under the direct control of the Ministry of Shipping. They take charge not only of the sea transport within the country but also foreign trade transport. Thus, they have more duties and responsibilities than before. In addition, the Soviet Ministry of Shipping has other subordinate organs such as the all-Soviet ships chartering company, all-Soviet foreign ships agency, all-Soviet ships salvaging company, seawise passenger transportation company, oceangoing ships supplies company and the maritime satellite communication bureau. As a result of the reorganization, full play was given to the zeal and initiative of the shipping companies. This played an important part in promoting transportation efficiency, lowering transportation costs and increasing foreign exchange earnings and profits.

2. Placing main dependence on importing ships from abroad.

Although the Soviet Union's shipbuilding industry developed greatly beginning from the 1960's and despite the fact that the country in the early 1970's owned 19 major shipbuilding yards and 127 docks of which 30 could berth 10,000-ton class ships and was able to build various types of large modern ships, two-thirds of the country's shipping investments were devoted to building various ships other than merchant ones. As a result, the annual production of merchant ships was rather small. In 1975, the merchant ships built had a gross tonnage of only 396,000 tons, ranking 15th in the world. This could only meet 30 percent of the annual rate of increase required for domestic shipping. Hence, the rapid development of the Soviet merchant marine depended mainly on ship purchases from abroad.

East Germany, Poland, Finland, Yugoslavia, Japan, West Germany, France, Britain and Holland were the principal countries exporting merchant ships to the Soviet Union. In particular, East Germany and Poland made up 60 percent of the Soviet imports of merchant vessels. Some 88 percent of the total number of ships built by East Germany between 1950 and 1970 were supplied to the Soviet Union as were over half of the gross output of Poland's shipyards from 1949 to 1975. Some of the Soviet Union's modernized container vessels and oil tankers were procured on credit from Western nations and Japan. Within the Ninth Five-Year Plan period alone, the Soviets spent some 2,800 million rubles on importing ships and shipping equipment. It has been reported that the gross tonnage of merchant ships ordered by or already under construction for the Soviet Union ranks fourth in the world, of which 130 vessels now being built in East German and Polish shipyards are scheduled for delivery within the next 2 years.

3. Attaching importance to port construction. Following the continual expansion of its merchant marine, the Soviet Union began to step up its port construction work in the Eighth Five-Year Plan period (1965-1970), laying emphasis on renovating and expanding ports already in existance. Between 1971-1975 alone, 8,900 meters of berthing space was added and another 4,700 meters of new docking space built between 1976 and 1978. In renovating and expanding the ports, emphasis was laid on the ports along the coast of the Black Sea, such as Novorossiysk, Tuapse, Kerchi, Sochi, Kherson and Ilyichevski [0122 0448 0122 0434 1133 2448 1015], also on the northern ports of Leningrad and Arkhangelsk and on Port Nakhodka. In 1975, the mechanization level of loading and unloading work in Soviet ports reached 90 percent (the 1980 target is over 92 percent). At present, the Soviet Union has 70 ports each capable of handling 1 million tons of freight a year. Of these, 9 big ports can each handle over 10 million tons of goods a year.

Since the 1970's, the Soviet Union has also built a number of large ports. For example it built the eastern port along the Pacific coast in the Far East. The plan was to build 64 docking berths there before 1990 and to provide the port with a handling capacity of 40 million tons of goods a year, principally handling the export of coal, timber, miscellaneous cargo and container goods and importing grains. Upon completion of the first-stage construction work in 1980, the port's annual handling capacity will reach 10 million tons. Aside from this, to help ease the state of congestion in Odessa, the biggest port along the coast of the Black Sea, in recent years a new port, Grigoryevka, was built some 30 kilometers northeast of Odessa specially to handle chemical goods (ammonia water, urea and calcium phosphate fertilizer).

III. Principal Measures in Shipping Expansion

1. Continually setting up new shipping lines and expanding the shipping network. In the first half of the 1960's, the Soviet Union set up four different shipping lines separately to Egypt, Cuba, Vietnam and India, using the pretexts of "military aid," "economic aid" and foreign trade. In the second half of the 1960's, it further initiated regular sailings from Europe to Central and South America, Europe to the Far East, Europe to Oceania, the Far East to India and the Far East to North America. In addition, a round-the-world shipping line was started. Since 1971, aside from entering on a grand scale the shipping arenas connecting Europe and Southeast Asia, North America and Southeast Asia, Europe and Africa and crossing the Pacific and Atlantic oceans, Soviet merchant ships have initiated a joint shipping line across Siberia, linking the European and Asian continents. In 1978, the Soviet Union had in operation 55 international shipping lines on regular sailing schedule (including irregular sailings, the total number of shipping lines was 70). Of these, 39 lines were direct sailings while 16 required intermediate connections. In all, 300 merchant vessels, with a gross tonnage of 3 million deadweight tons, were in use. At present, Soviet merchantmen are traversing the Atlantic, Pacific and Indian oceans as well as the vast maritime areas starting in the north from Iceland and ending in the south in Australia, New Zealand and the southern portion of Latin America. In 1978, the Soviet merchant marine visited 1,400 ports in 125 countries.

2. Capturing the shipping market by lowering freight charges. The Soviet Union adopted the tactic of greatly lowering freight charges in competing with the European and American countries and with Japan in an effort to seize control of the world shipping market. In general, the extent of the lowered charges was from 15 to 20 percent, but at times it reached 40 to 50 percent, and even 70 percent. According to Western sources, on the shipping lines from North Europe to the St. Lawrence River and the Great Lakes region in North America, the Soviet Union reduced the freight charges by 25 percent. On the lines from Europe to South America and the Western coast of the United States, from Britain to East Africa and from North Europe to the Western coast of South Africa, the reduction were 30 percent. On the lines from West Germany to Canada, from Europe to Australia, and from the Far East to the United States and Canada, the freight charges of Soviet merchantmen were lower by 40 percent compared with those of their Western counterparts. By adopting such tactics, the Soviet Union succeeded in getting into the more than 10 major shipping lines formerly under the control of Western shipping companies. This was a serious blow to the British, West German, Greek, Japanese and American shipping companies. It disrupted the world shipping market and aggravated the present depressed state of Western shipping.

3. Setting up numerous jointstock shipping companies. As a result of the Soviet Union hoisting the banner of "economic cooperation" and employing tactics such as the so-called joint operation of shipping lines, signing of bilateral agreements and setting up joint-stock multinational companies, Soviet shipping managed to force an entry into the domain of the Western states. According to incomplete statistics at the end of 1976, the Soviet Union had in operation outside the country 22 joint-stock shipping companies and agencies, scattered throughout Western Europe, North America, Southeast Asia, Latin America, the Middle East and Oceania. Of them, certain principal companies were established in Rotterdam, Antwerp, Hamburg, Bremen and Singapore. By means of these joint-stock companies, the Soviet Union effected direct control of the shipping industry of certain countries of the Third World where it solicited business on the spot and had a virtual monopoly of the shipping business between the Soviet Union and the countries concerned. For example, the largest, the Universal Shipping Company, set up in Belgium. The Soviet Union has control of 90 percent of this company's stocks and also full, or nearly full, control of its branch companies in Belgium, Holland, West Germany and Austria. This company operated 15 shipping lines with regular scheduled sailings for the Soviet Union. In 1975, it obtained 9 million tons of freight transport for the Soviet Union.

4. Contending for high freight charge cargo. The shipping policy of the Soviet Union is to make use of foreign chartered ships to carry low freight charge cargo in its foreign trade and to reserve its own merchant marine for use in the international shipping market in order to contend with Western countries for the transport of high freight charge goods. Since the latter part of the 1960's, the Soviet Union has vigorously built up its fleet of oceangoing ordinary freighters to transport high freight charge mixed cargo. In 1976, the gross value of the Soviet Union's foeign trade was only 4.2 percent of the gross value of the entire world's foreign trade while its own volume of mixed cargoes needing shipping transport was but 2 percent of the world's gross volume of mixed cargo needing shipping transport. But the gross tonnage of the Soviet merchant ships carrying mixed cargo was 9.5 percent of the gross tonnage of the world's shipping fleet carrying mixed cargo. In other words, the Soviet Union's own shipping needs were exceeded by over 3.7 times. Thus, the Soviets made use of their fleet of freighters to obtain in the international shipping market a large quantity of high freight charge cargo. On the other hand, 80 percent of the Soviet Union's goods in its export and import trade were goods in bulk or liquid form. They should be carried by bulk cargo ships and oil tankers but the carrying capacity of these kinds of Soviet ships can only handle one-third of the demand while the Soviet's bulk carriers are particularly insufficient in this regard. Because of the low freight charges of these categories of goods and the excess in the world's shipping market of oil tankers and bulk carriers, the Soviet Union resorted mainly to chartering foreign ships to carry these kinds of goods. In this way, after deducting the chartering charges, each year the Soviet Union earned a sizable sum of foreign exchange from shipping transport. In 1976 alone, the amount earned reached $600 million.

5. Stepping up the development of containerization and of "land-bridge" container transport. In the middle of the 1960's, the shipping world began developing large scale container transport. Since the 1970's, shipping "containerization" has developed further. To compete with the Western world for the shipping market, the Soviet Union likewise vigorously built and imported from abroad various types of container ships. It built large container wharves and transport lines. In 1978, the Soviet Union already had 21 container ships, in addition to 29 freighters which could readily be converted for use in container transport and 15 ships of the "roll-in-roll-off" type. The total capacity of these ships was 58,000 containers (each container is 20 English feet long weighting 18 to 20 tons). At the same time, a batch of container wharves and transport lines were built in Nakhodka, Eastern Port, Leningrad, Odessa and Ilyichevski. At present, 27 of the 55 international regular shipping lines of the Soviet Union are run by container vessels carrying goods directly to the ports of destination. It is planned that by 1980 the freight volume carried by Soviet container ships will increase by 60 percent over 1975, reaching a total of 7 million tons.

Furthermore, the Soviet Union took advantage of its geographical position of lying across the European and Asian continents to promote vigorously the so-called "land-bridge" container transport. The "Siberian large land bridge" formally in operation in July 1971 was in effect a sea-land transport line linking 35 nations and areas in Europe and Asia. Under this scheme, container vessels are used to carry goods, destined to European countries from Japan, Southeast Asia and the West coast of North America, first to Nakhodka, Eastern Port or Vladivostok in the southern part of the Soviet Union's Far Eastern area. The goods are then transhipped on the trans-Siberian railway to ports or territory of the European sector of the Soviet Union, thence transhipped by sea, or railway or highway to destination ports in the European countries. This container transport line has a total length of 13,000 kilometers, only one-half of the distance around the Cape of Good Hope. It is one-third shorter than the route via the Suez Canal and the Mediterranean. The transport charges are 20 to 25 percent lower than if the entire voyage were by sea, with the time required likewise shortened by 35 days. Hence, it has a strong competitive potential. In 1971 the freight volume across this "Siberia great land bridge" was only 600 container boxes but by 1978 it went up to 120,000, of which Japan's share was 48,000.

IV. Effects and Eventual Results of Shipping Expansion

1. A large transport volume has been taken away from the West. In the Soviet Union's expansion of its shipping industry, its first target was the North Atlantic area which included West Europe and the North American coast, since this was the major shipping route connecting the European countries with the United States and Canada. The volume of freight and passenger transport in this sector accounted for about 60 percent of the total volume of freight and passenger transport in world shipping. Obviously, control by the Soviet Union of North Atlantic shipping would emobdy important significance, both politically and militarily, in the pursuance of its global strategy. For this reason, the Soviet Union devoted four-fifths of the transport capacity of its oceangoing fleet to the European sector. At present,

there are 26 direct shipping lines with Europe as the starting point, 16 of which emanate from Northwestern Europe in addition to 6 through shipping lines. Since 1971, the transport capacity of Soviet merchantmen on the West European trade and shipping lines has already increased five-fold. In such ports as Rotterdam, Antwerp and Hamburg which literally are the gateway of the West European industrial center, few Soviet ships used to be seen some 10 years ago. Now each year the number of Soviet ships visiting these ports is as follows: Antwerp, 1,500; Rotterdam, 1,200; and Hamburg, 1,000. In recent years, Soviet merchant ships carried 75 percent of the trade between West Europe and the Soviet Union. In 1977, the quantity of freight carried by Soviet merchant vessels on the North Atlantic shipping lines was equivalent to 20 percent of the gross freight volume carried by ships flying the flags of member nations of the Western shipping alliance.

At present, Soviet merchant ships have managed to obtain a share of the two-way shipping transport on the North Atlantic which used to be monopolized by Western shipping companies. The Soviet share is now roughly 25 percent. In addition, the Soviet Union has a share of roughly 25 percent of the freight transport between North Europe and the Mediterranean and between North Europe and the Western coast of South America. Likewise, it accounts for 23 percent of the freight transport between the 5-lake region of the United States and the Mediterranean, Portugal, Spain and ports along the Black Sea coast. It also has 20 percent of the shipping transport between the Gulf of Mexico and the Mediterranean and 13 percent of that between Hamburg and Bremen of West Germany and ports on the Eastern coast of the United States.

On the Pacific Ocean and the Indian Ocean, in 1978 the Soviet Union operated 13 scheduled shipping lines and 10 through shipping lines, about half of which were initiated in the last 3 to 5 years. The great proportion of these lines are within the domain of other countries, for example, between Japan and Southeast Asia and the Pacific, between the United States and Japan and between Southeast Asia and Oceania. Since 1975, the transport volume handled by ships of the Soviet Far East Shipping Company has accounted for 15 percent of the entire freight transport volume of the Pacific. In 1977, the company carried 0.834 million tons of freight on its 10 regular shipping lines on the Pacific, surpassing all the member shipping companies participating in the shipping alliance. At present, aside from monopolizing the great proportion of the shipping transport of Soviet trade with Southeast Asia, South Asian countries, Japan and Australia, the Soviet Union's merchant marine has a 20 percent share of the shipping freight volume between Hong Kong and West Europe, 12 percent between West Europe and the Far East and between Australia and Europe. With the completion in 1980 of the first-stage construction of the Eastern Port, Soviet container ships will obtain more of the container freight to and from the Pacific and West Europe.

2. Depression in shipping and shipbuilding in the West and in Japan has been further aggravated. Due to the economic crisis of the capitalist world and the Soviet Union stepping up its competition in shipping, since

1973-1974, a serious depression has developed in the shipping sector of the Western world and Japan. According to the "Seaborne Transport Annual Report" released in August 1978 by the Economic Cooperation and Development Organization, idle ocean shipping as of the end of 1977, reached 48 million deadweight tons. Additionally, according to data published by the UN Trade Development Council, in November 1977 idle tankers in the world reached 108 million deadweight tons, or roughly 40 percent of the deadweight tonnage of the tankers in the entire world. A large number of old tankers were sold at prices 20 to 45 percent below the 1976 level or else were broken up and disposed of as scrap. It is estimated that in 1978 the capitalist world sold or broke up as scrap some 15 million deadweight tons of tankers (9 million tons in 1977). Although in the first half of 1979, the excess in the merchant marine tonnage of the world's capitalist shipping was somewhat lessened, the number of idle ships was still higher than the 1975 level.

The serious shipping depression in the West and in Japan naturally affected the shipbuilding industry. According to Western reports, in 1978 the 33 major shipbuilding countries and areas of the entire world altogether built 1,091 ships or over 2,000 tons each. With a total of 28.10 million deadweight tons. This was 25.6 percent less than 1977 and a reduction of 53.4 percent compared with 1975 which was the best year in world shipbuilding. Among the countries, in 1978 Japan, which occupied first place in shipbuilding in the world, built only 465 ships of 2,000 tons or more each, making a total of 10.24 [as published] million tons, which was a decrease of 40 percent compared with 1977 and a decrease of 68.9 percent compared with the record year 1978 [as published]. As of 1 January 1979, shipbuilding yards in 33 major shipbuilding countries of the world received orders to build 1,315 ships with a total of 30.225 million deadweight tons. This was only one-half the total number of merchant ships built in 1975 and only 14.7 percent of the orders received as of 1 January 1975 which were for 2.824 ships with a total of 205.68 million deadweight tons. It was a 43.5 percent decline compared with the orders received on 1 January 1978.

3. Shipping in countries of the Third World was seriously affected. In the course of the Soviet shipping expansion, countries of the Third World were the victims. Since the 1970's, Soviet merchantmen in large numbers have invaded the water domains of Southeast Asia, reaping large profits from the countries bordering along the shores and seriously disrupting the development of the shipping enterprises in these countries. In the first half year of 1976, the Soviet-Philippines Shipping Company collected nearly $10 million of freight charges from the Philippines, an increase of 1.9 times over the second half year of 1975. The Thai Shipping Company which in the past handled 40 percent of the export trade of Thailand was only able to handle since the second half year of 1975 less than 10 percent of Thailand's export trade, all because of the Soviet Union's cutrate competition. In Africa, the present number of Soviet ships sailing between North Europe and Africa is equivalent to 10 times the actual number needed to carry the entire trade between the Soviet Union and Africa. Before long, Soviet merchant ships may be expected to obtain one-third of the freight transport in the foreign trade between Africa and the outside world.

The 10th Five-Year Plan commencing 1976 called for increasing the Soviet merchant marine by about 5 million tons within the period, or an increase of 25 percent. Of this planned increase, the ratio occupied by freighters carrying dried goods in the entire merchant marine is to be increased from 32 percent in 1975 to about 50 percent in 1980 while that of container ships will be increased by 100 percent. The gross shipping transport volume will be raised by 32 percent. This sufficiently illustrates that the scale of expansion in Soviet shipping will be further enlarged and its competition with the West and with Japan and more intense.

The Soviet Union's intensification of its shipping expansion program not only endangers countries of the Third World but also directly threatens the economic interests and national security of the Western states. In general it incurs people's dissatisfaction and resistance. Many countries of the Third World have risen and strengthened their bilateral and multilateral cooperation to protect their economic rights. For example, in April 1976, the "Association of Director Boards of Transport Merchants of the Alliance of Southeast Asian Nations" established. The purpose of this organization was to "seize back the right of determining one's own destiny and future" in the field of shipping.

The Western nations which have suffered heavily from the effects of the Soviet Union's shipping expansion are presently united to take joint countermeasures. The EC adopted a resolution at the end of 1978 to the effect that effective 1 January 1979 and for a period of 2 years, stern supervisory measures will be taken covering the conditions of freight transport along the shipping lines from the nine countries of the community to the East coast of the United States, the East coast of Africa, Latin America and the Far East so as to determine what damages Soviet merchant ships have caused to the shipping interests of the member nations of the community and take "joint measures" to counter this kind of "aggressive and noncommercial activities" of the Soviet shipping company. Condemning the cutrate business-grabbing activities of Soviet merchant ships on the world's principal shipping lines, President Carter of the United States signed an ordinance in October 1978 to "counter the activities of state-operated shipping fleets" and authorized the United States Board of Shipping to take punitive measures, if necessary, against the cutrate activites of Soviet merchant ships. The Japanese Government has also decided not to sanction the Soviet application for the formation of a so-called "Japanese-Soviet Shipping Company," thereby preventing the Soviet Union from acquiring control of Japanese shipping. It can be predicted that the Soviet shipping expansion will meet increasingly strong opposition.

CSO: 4006

TRANSPORTATION

'RENMIN RIBAO' EDITORIAL ON PRC'S TRANSPORTATION WORK

OW302125 Beijing XINHUA Domestic Service in Chinese 0751 GMT 30 May 80

[Report on 30 May RENMIN RIBAO editorial entitled: "Place Communications and Transportation in a Vanguard Position"]

[Text] Beijing, 30 May--The experience of various developed industrial countries in the world and the positive and negative experience of our country during the past 30 years have all shown that modern communications and transportation should be the vanguard of the national economy.

During the period of recovery of our country's national economy and during the First Five-Year Plan, communications and transportation work started before work in developing industrial and agricultural production. At that time, the building of a number of plants, mines and other enterprises and construction work in China's southwest and northwest regions all began following the building of railways and highways. The speed of increase of the transportation capability far exceeded the speed of increase of industrial and agricultural production. Regretfully, this correct policy had not been implemented continuously in the past. For a long period, the progress of the development of communications and transportation was quite slow. According to statistics by a department concerned, when the output of industrial products increased by 1 dun in our country, the transportation capability actually increased only 0.9 dun. This situation lasted a long time and hampered the development of our national economy.

At present, the contradiction of our country's inadequate transportation capability is quite conspicuous. Transportation lines are insufficient, the capacity to transport goods and materials is low and the distribution of transportation facilities unreasonable. All these things have made communications and transportation work a prominent weak link, which is quite incompatible with the development of the national economy.

To solve this problem, we must establish the guiding principle of "Placing Powerline and Road Construction in the First Place" [Dian Lu Xian Xing 7193 6424 0341 5887], strengthen communications construction based on a long-range viewpoint and make preparations for transporting a greater volume of goods and materials. At the same time, we should make full use of existing facilities, improve management in communications and transportation work, tap potentialities, make efficient utilization of transportation facilities and fulfill the current transportation tasks.

The editorial pointed out: According to our experience throughout the years, in order to strengthen communications and transportation construction, we must properly handle a number of things as follows:

First, we should pay attention to the relations between communications and transportation and the entire national economy. In making decisions on the distribution of industries, the development of natural resources, the building of plants, mines and other enterprises and the development of foreing trade, the state must consider corresponding construction in communications and transportation and build transportation facilities beforehand.

Second, we should make rational utilization of various means of transportation. The five modern means of transportation, including railway, navigation, highway, aviation and pipelines, each has its most appropriate use. We should take local conditions into consideration, decide which means of transportation should be used according to geographical conditions and the ecoomic level in various localities, using water or land transportation as appropriate, and form a socialist transportation network involving the distribution of communications lines and the volume of transportation based on the interest of the state as a whole.

Third, it is necessary to properly adjust the ratio of development within the communications and transportation front. At present, communications and transportation departments are faced with a lot of problems. Berths in coastal ports are inadequate. They are the most urgently needed facilities in the construction of communications and transportation and in the entire national economy. We must energetically speed up the building of port facilities. To cope with the increase in foreign trade, we must vigorously develop an ocean-going fleet. In inland navigation, some passages are choked with silt or seriously obstructed by sluice. These problems must be solved promptly. Existing highways are crowded, there are "broken sections" between localities and some roads in cities and suburban areas are "jammed with traffic." They all need to be rebuilt in a planned manner.

At present, the state is limited by available funds and the supply of materials and cannot increase by a great amount the investment in the development of communications. Therefore, the communications departments must solve these problems systematically, according to their urgency and importance.

The editorial points out: To reform the existing economic management system of communications is an effective way to increase transportation efficiency. We must act in accordance with the law of communications and transportation, carry out economic management using economic methods and change the procedure of using administrative means exclusively. However, the structure of our communications departments is complicated--there are both modernized and manually-operated modes of production, and there are also enterprises owned by the whole people and those collectively owned. Reforming the sytem is an important policy matter, and we lack experience in this matter. Therefore, it is necessary to conduct investigations and study and carry them out steadily through experiments.

The editorial adds: At present, there are tremendous potentials in the turnaround rate of vehicles and vessels as well as in the service cability and utilization ratio of equipment. In order to mobilize these potentials and make fuller use of them, we must rely on coordination and cooperation. For instance, by organizing a certain portion of motor vehicles from government offices, enterprises and business units into integrated enterprises on the basis of equality and mutual benefits, the transportation efficiency of motor vehicles can be greatly increased. It is estimated that the transportation capacity of the whole country can be increased by more than 10 percent through the single effort of organizing joint transport service of railways, highways, waterways and between short-distant places; this will also provide convenience for both owners of cargo and passengers.

The communications departments at various levels must regard the solution of the problem concerning the "difficulties in travel" among urban and rural people as an important matters concerning the livelihood of the masses, and keep a firm grip on its by effectively doing a good job in organizing and managing passenger transport service. The safety of passengers must be placed above everything else so that passengers can reach their destination safely, on schedule, conveniently and comfortably.

To perfect the laws and regulations on communications and transportation is one of the projects of fundamental importance in building our communications and transportation service. We must sum up past experience and strive to work out a series of comparatively systematic laws, rules and regulations as quickly as possible so as to ensure good order and safety management in communications and transportation, and to enable communications departments and the broad masses of people to have laws to observe and regulations to follow.

The editorial concludes by saying: Doing a good job in communications and transportation is not only a task of the communications departments but also a common responsibility of each department of the national economy. For instance, paying attention to the rational flow of direction while allocating and transferring supplies, increasing the washing and dressing capacity while delivering ores, and so on and so forth will unanimously and effectively reduce the waste of transport means and alleviate the pressure on transportation. So long as every one pays attention to communications and transportation service, and strengthen this weak link, communications and transportation can definitely be placed in a vanguard position.

CSO: 4005

TRANSPORTATION

BRIEFS

HIGHWAY MILEAGE STATISTICS--Beijing, 19 May--The Communications Ministry recently released new statistics about China's total highway mileage. As of the end of 1979, China's total mileage of highways opened to traffic reached 890,000 kilometers, or some 12 times that of the early period after the liberation. Except for Xizang's Medog County and Sichuan's Derong County, all of some 2,000 counties throughout the country have highways. [Beijing XINHUA Domestic Service in Chinese 0225 GMT 19 May 80]

CSO: 4006 END

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CHINA REPORT: RED FLAG*
CHINA REPORT: Science and Technology

WORLDWIDE SERIAL REPORTS

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WORLDWIDE REPORT: Epidemiology
WORLDWIDE REPORT: Law of the Sea
WORLDWIDE REPORT: Nuclear Development and Proliferation
WORLDWIDE REPORT: Telecommunications Policy, Research and Development

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